Digital Receiver FR310

Service
Service
Service

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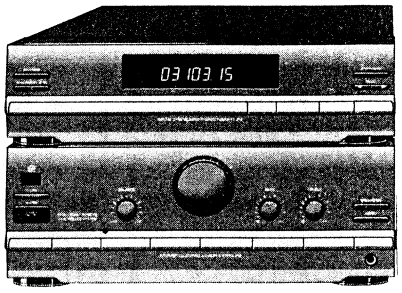

ServiceManual

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*Pour votre sécurité, ces documents soivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

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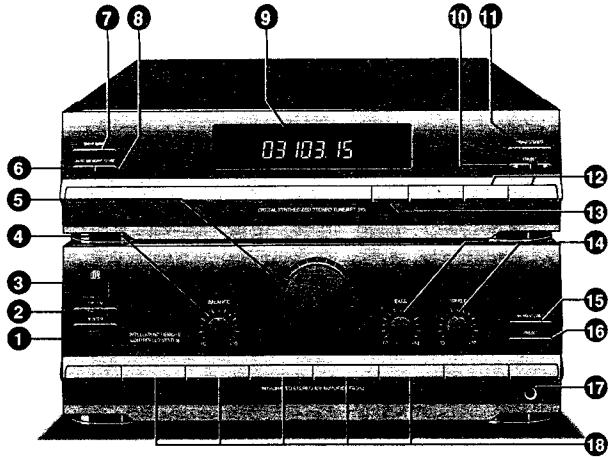
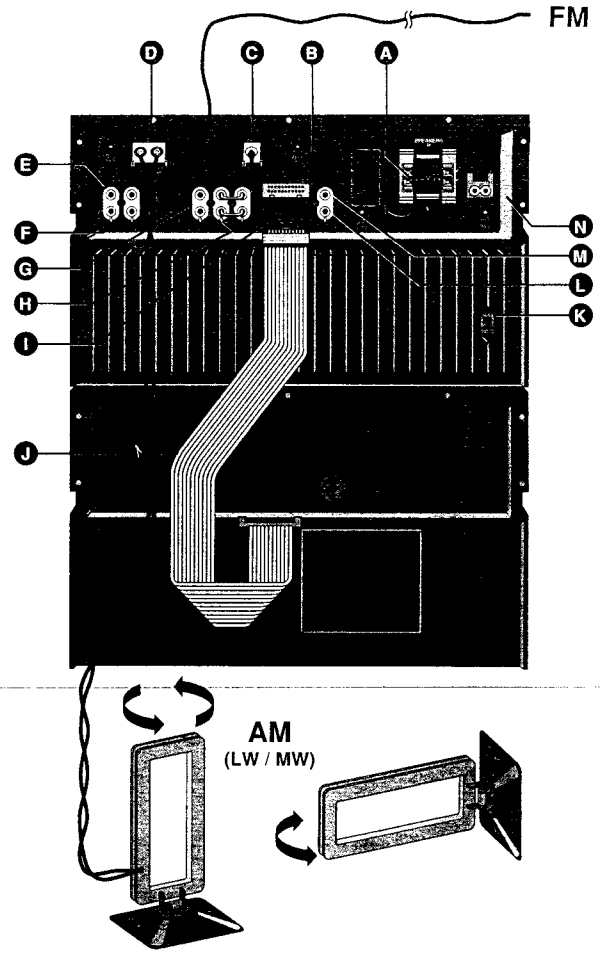
Connections & Controls



1)	Power ON/OFF	1271	12)	Frequ. UP/DOWN	1461/1465
2)	Stand by	1463	13)	Memory OPEN/CLOSE	1467
3)	IR-eye	6441	14)	Bass/Treble	3511/3512
4)	Balance pot	3525	15)	Surround	1501
5)	Volume pot	3526	16)	Bass expansion (DBB)	1502
	Indicator LED	6001	17)	Headphone	1400
6)	Auto Memory	1462	18)	Source selector PHONO	1419
7)	Wave band	1464		TUNER	1415
8)	Auto scan	1466		CD	1416
9)	FTD	1451		TAPE	1417
10)	Preset UP/DOWN	1468/1471		TV	1418
11)	Mono/Stereo	1469			



A)	Speaker terminal	1272	H)	Equalizer IN/OUT	15:
B)	Tape IN/OUT	1554	I)	Holes to store equalizer bridges	
C)	FM aerial 75Ω	1101	J)	Connection to CCD310	
D)	AM frame aerial	1102	K)	Voltage selector (not in all versions)	
E)	PHONO	1551	L)	Easy link	1561
F)	TV	1551	H)	RC5	1561
G)	Rec out	1553	N)	Mains socket	1273

Specification

General:

Mains voltage	:	220V / 50Hz for /00, /02, /08
	:	240V / 50Hz for /05, /10
	:	230V / 50Hz for /01
	:	120V / 60Hz for /17
Power consumption	:	≤ 150W at 2x32W output power
	:	≤ 22W in stand by
Supply out	:	+14V stab.
(for CCD310)	:	+12V unstab.
	:	-12V unstab.
	:	4,1V AC on -20V for FTD
	:	-25V for FTD

Tuner:	FM	MW	LW
Tuning range	87,5 - 108 MHz	522 - 1611 kHz (not for /17) 530 - 1700 kHz (only for /17)	148 - 284 kHz
Aerial input	75 Ω (not for /17) 300 Ω (only for /17)	Frame aerial (pos 430)	Frame aerial (pos 430)
IF	10,7 MHz ± 25 kHz	450 kHz ± 1 kHz	450 kHz ± 1 kHz
Sensitivity	4 µV (2 µV typ.)	3 mV/m (2 mV/m typ.)	6 mV/m (not guaranteed above 250 kHz)
Image rejection ratio	30 dB (40 dB typ.)	27 dB (30 dB typ.)	40 dB (43 dB typ.)
-3 dB limiting point	5 µV (2 µV typ.)		

Amplifier:

Output power	:	2 x 32W at 8Ω D=0,7% (from 63 Hz to 12,5 kHz)
	:	2 x 25W at 8Ω D=0,09% (measured at 1 kHz)
Music power	:	2 x 52W at 8Ω
Headphone	:	6,3mm stereo jack 3V into 1kΩ 350mV into 8Ω
Power stage protection	:	AC no
	:	DC yes
	:	Temperature no
	:	Shortcircuit yes
Frequency response	:	20 Hz - 20 kHz ± 2 dB
Tone control	:	Bass from +10 dB to -10 dB ± 2 dB at 80 Hz
	:	Treble from +10 dB to -10 dB ± 2 dB at 10 kHz
Input sensitivity	:	CD 350 mV
	:	TV 200 mV
	:	PHONO 2,5 mV
	:	TAPE 580 mV
	:	Equal. 250 mV
Output voltage	:	TAPE 250 mV
	:	Equal. 250 mV
	:	Rec out 250 mV

DISMANTLING OF POWER BOARD

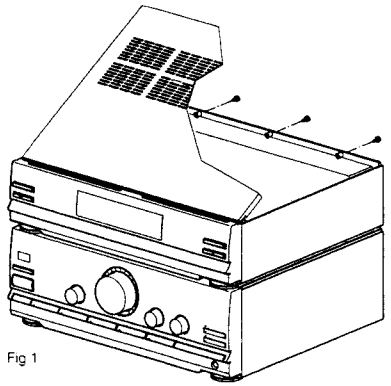


Fig 1

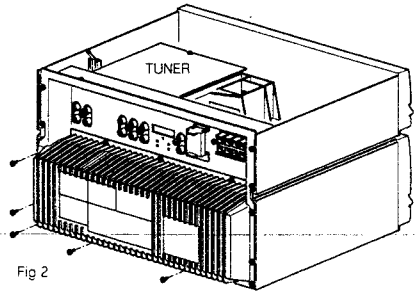


Fig 2

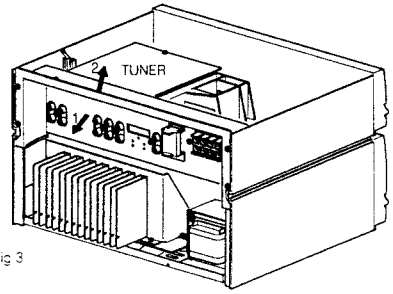


Fig 3

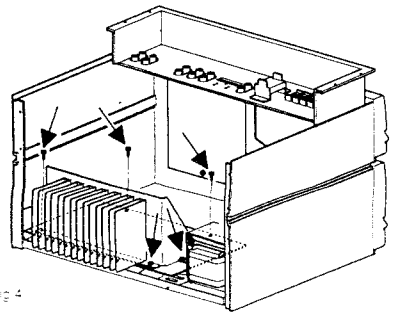


Fig 4

1) Loosen 3x Torx 10 screws (see figure 1).
2) Remove top (see figure 1).
3) Loosen 9x Torx 10 screws and 6x Torx M4x10 on rear part (see figure 2).
4) Remove Power lever (pos 417). Only snapped on power switch.
5) Bring the upper rear part in an upright position (see figure 3).
6) Loosen 5 screws (3x Torx M4x10, 2x Torx 10).

DISMANTLING OF TUNER PANEL

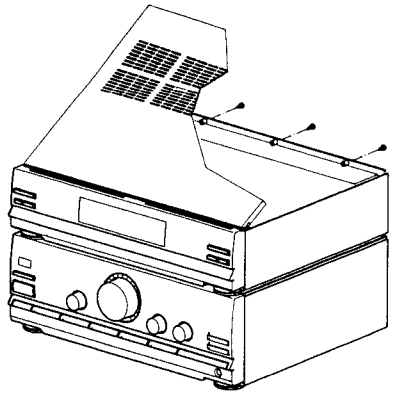


Fig.1

1) Loosen 3x Torx 10 screws (see figure 1).
2) Remove top (see figure 1).
3) Loosen 4x Torx 10 screws on aerial terminals (see figure 2).
4) Loosen 1x Torx 10 on printed circuit board (see figure 3).
5) Bend the hidden snaps (shown in fig. 2) with a small screw driver sidewards while pulling the PCB as shown in figure 3.

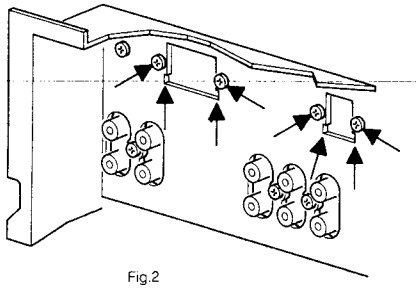


Fig.2

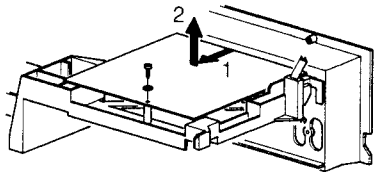


Fig.3

EVA.01199
T05-045

DISMANTLING OF OUTPUT PANEL

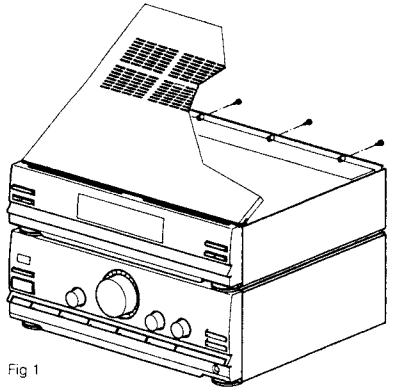


Fig 1

1) Loosen 3x Torx 10 screws (see figure 1).
2) Remove top (see figure 1).
3) Remove Power lever (pos 417). Only snapped on power switch.
4) Remove 3x Torx 10 (see figure 2).
5) Remove PCB as shown in figure 3.

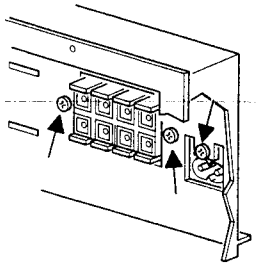


Fig 2

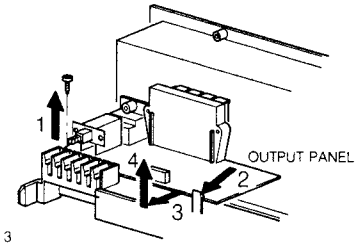
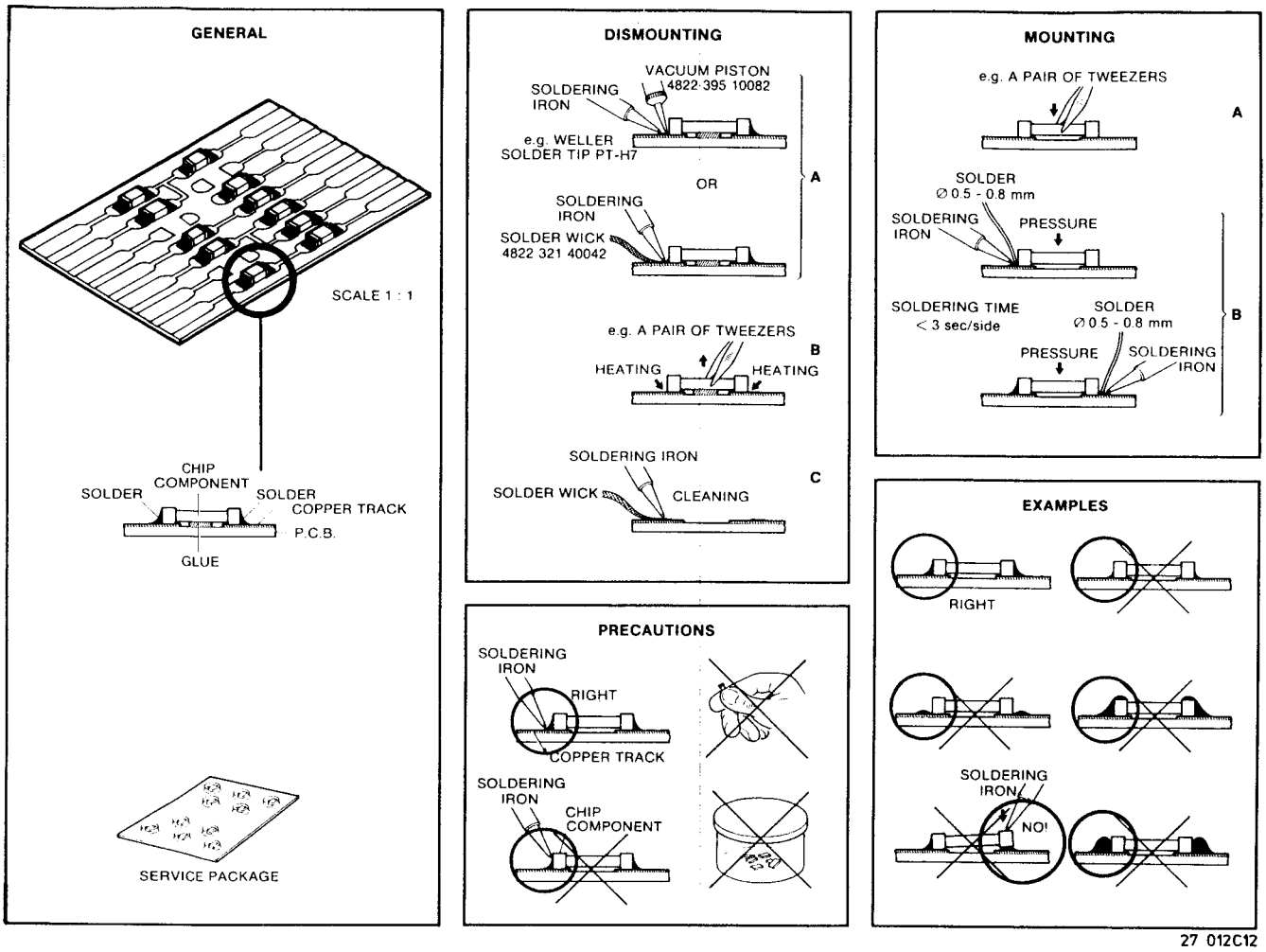


Fig 3

EVA.01206
T28/047



27 012C12

ESD

(GB) WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD).
Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance.
Keep components and tools also at this potential.

(F) ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD).
Unsorgfältige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern.
Sorgen sie dafür, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.
halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(NL) WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen.
Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

(I)

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambiago identici a quelli specificati.

(F)

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

DISMANTLING OF SOURCE SELECTOR

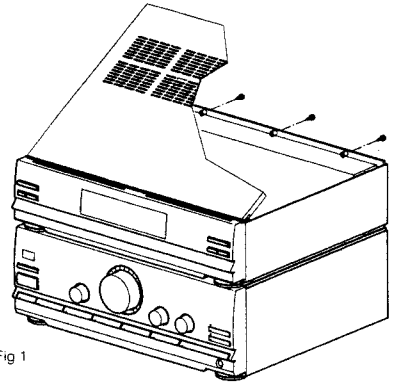


Fig 1

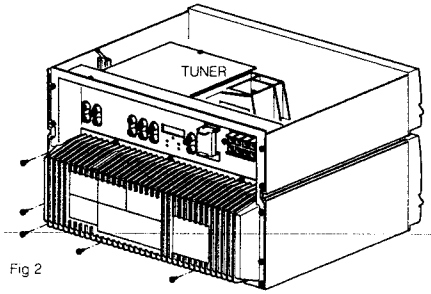


Fig 2

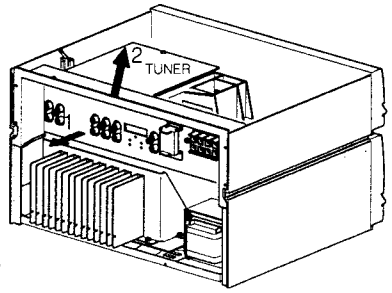


Fig 3

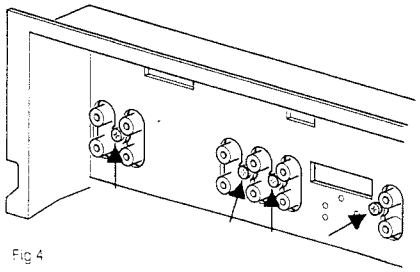


Fig 4

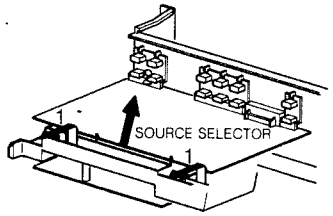


Fig 5

1) Loosen 3x Torx 10 screws (see figure 1).
2) Remove top (see figure 1).
3) Loosen 9x Torx 10 screws and 6x Torx M4x10 on rear part (see figure 2).
4) Remove Power lever (pos 417). Only snapped on power switch.
5) Bring the upper rear part in an upright position (see figure 3).
6) Loosen 5x Torx 10 screws (see figure 4). Remove equalizer bridges.
7) Loosen two snaps (see figure 5) and remove PCB.

ACCESS TO FRONT PANELS

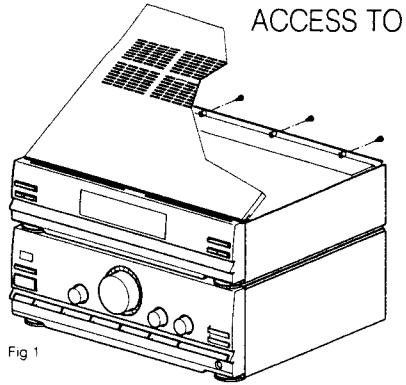


Fig 1

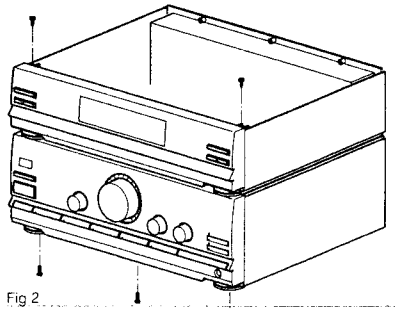


Fig 2

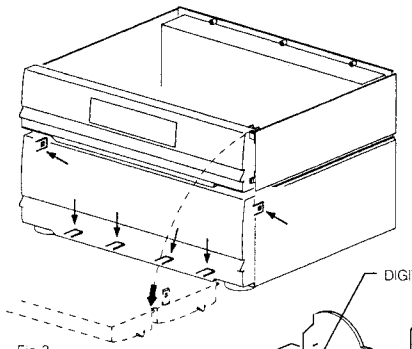
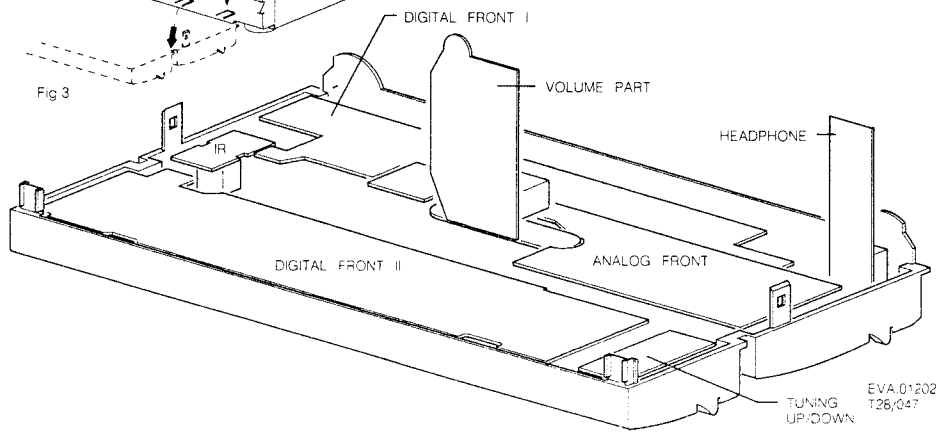
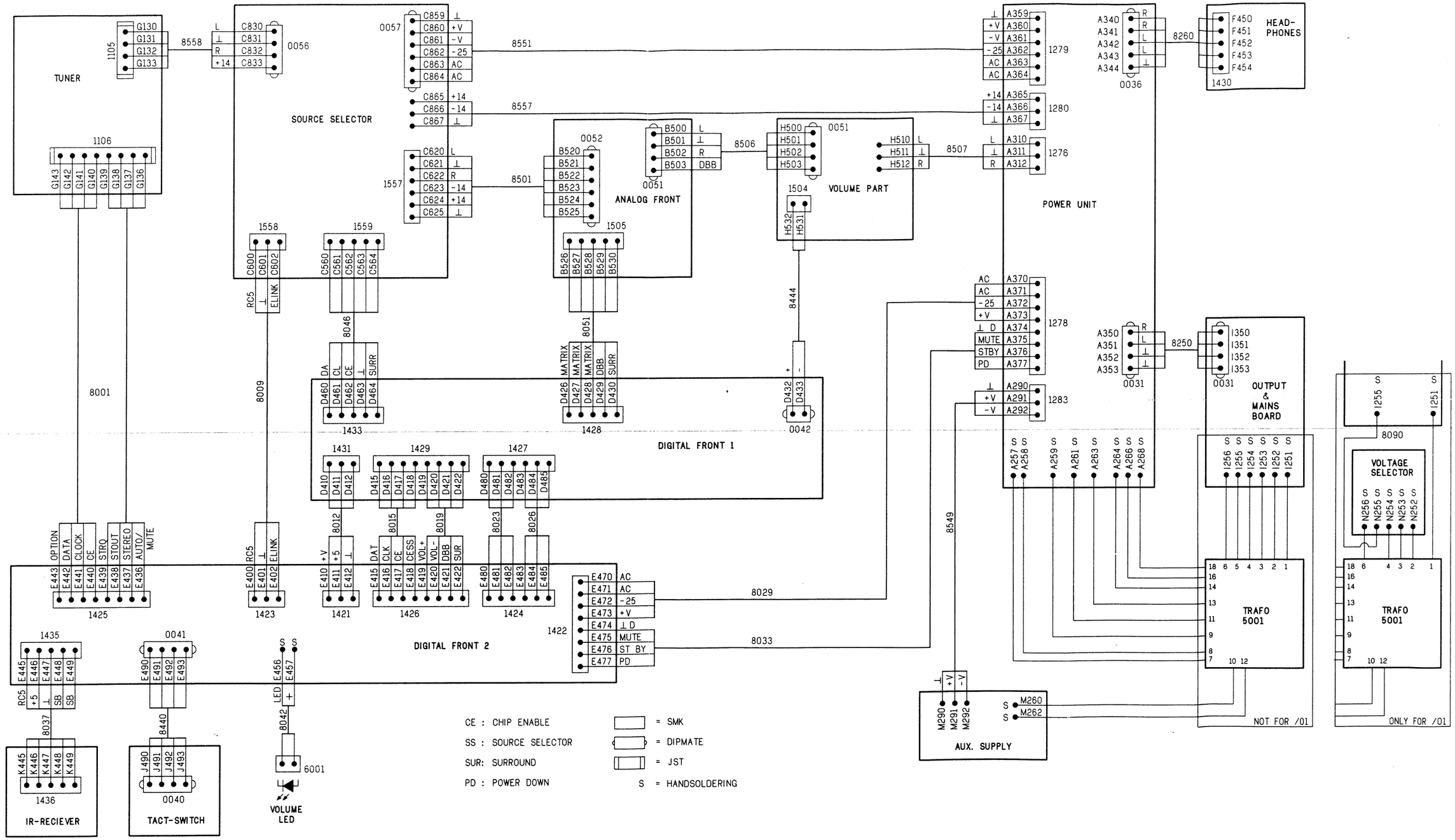


Fig 3



1) Loosen 3x Torx 10 screws (see figure 1).
2) Remove top (see figure 1).
3) Loosen 2x Torx 10 - front/side panels (see figure 2).
4) Loosen 3x Torx M4x10 on bottom (see figure 2).
5) Loosen two snaps on side panels (see figure 3).

WIRING DIAGRAM



0031 E11 1273 B13 2255 D 2 2264 E 4 2275 E 5 2286 E 7 2309 C 8 2322 E 9 2333 F10 3258 C 3 3271 D 5 3280 E 6 3290 E 9 3301 E 2 3310 B 3 3330 E 9 3339 B10 3356 D 5 3380 F 7 6252 C 5 6277 B10 6294 B 3 6314 E 9 6335 E10 7256 C 3 7267 E 4 7286 C 3 9251 F 2 9262 D 3 9281 D 5 9290 D 6 9309 B 9 9319 E 6 9340 D12 9356 D11
0031 B 6 1276 B 2 2256 B 2 2265 E 5 2276 E 8 2287 E 3 2313 B 9 2323 E 3 3250 B 2 3259 D 2 3272 D 4 3281 E 3 3291 F 5 3302 E 7 3303 E 2 3312 C 4 3332 F10 3343 F 9 3358 E 3 3290 C 4 3331 D 9 3342 C10 3357 D 4 3381 F 5 6253 D 4 6278 B 9 6295 B 3 6315 F10 6338 E 9 7257 E 3 7268 F 7 7287 E 3 9252 C 4 9265 F 4 9282 D 6 9292 E 6 9311 E 9 9321 D10 9341 B10 9360 C 9
0036 B 5 1278 C10 2257 C 2 2266 D 3 2277 E 4 2288 E 8 2314 B10 2326 C 3 3251 B 2 3260 B 2 3273 E 5 3282 E 7 3294 E 7 3304 E 3 3314 C 4 3333 F10 3344 F 9 3358 F 5 6261 F 4 6279 B 9 6296 B 4 6318 E 7 6339 D10 6268 C 3 6280 B 9 6305 B 4 6319 E 2 7250 C 2 7259 F10 7258 D 4 7269 F 3 7288 F10 9253 F 3 9267 C 5 9283 C 5 9296 F 7 9312 C10 9324 B11 9342 D12 9361 E 3
1250 B 7 1279 C10 2258 C 2 2267 D 2 2278 E 8 2289 D 6 3252 C 2 3261 B 2 3274 C 3 3283 F 3 3295 E 8 3296 E 4 3297 E 3 3304 E 7 3313 C 6 3334 F10 3345 E 9 3359 D 5 3382 D 5 6262 E 9 6307 C 4 6327 C 2 7252 C 2 7260 F 7 7275 F 4 7294 F 9 9256 C 3 9269 F 5 9285 D 5 9298 E 8 9314 C10 9331 C11 9345 D12
1251 B 6 1280 C 9 2259 D 2 2268 C 4 2279 E 5 2292 C 4 2316 C 9 2327 C 6 3253 B 2 3266 C 3 3275 E 3 3284 E 8 3296 E 8 3305 D 4 3385 C 2 7253 C 2 7261 F 4 7280 C 5 7295 E11 9257 B 8 9258 D 3 9270 C 5 9286 E 6 9300 F 8 9315 D10 9333 E11 9346 D12
1259 B 9 1283 B10 2260 D 5 2269 E 3 2280 D 3 2293 C 5 2317 E 9 2328 F10 3254 C 2 3267 E 2 3276 D 4 3285 E 7 3298 E 4 3299 E 4 3306 C 3 3318 C 3 3337 C10 3354 C 3 3371 D 3 5252 D 5 6263 E 8 6281 B 4 6320 E 8 7251 C 2 7262 C 2 7261 E 7 7281 C 4 8250 B 5 9259 D 3 9273 C 5 9288 D 6 9301 F 8 9316 E10 9334 D11 9349 E10
1260 B 9 2250 C 2 2261 D 4 2270 E 8 2281 D 2 2296 B 2 3258 C 2 3268 B 3 3277 E 5 3286 E 8 3300 B 3 3309 E 3 3319 C 6 3336 F10 3353 D 2 3370 B 3 5250 B 5 6273 B 2 6283 C 7 6311 C 6 6331 C 8 7253 C 2 7264 E 7 7281 C 4 8250 F 2 9260 C 4 9275 B 4 9289 D 6 9308 C 9 9318 E10 9338 D12 9355 D 5
1271 B12 2251 D 2 2262 B 4 2271 E 3 2284 C 5 2303 C 8 2319 E 9 2330 C 8 3256 C 2 3269 E 3 3278 D 7 3287 E 4 3299 E 4 3308 C 3 3318 C 3 3337 C10 3354 C 3 3371 D 3 5252 D 5 6274 B 3 6292 B 2 6312 F10 6333 B 3 7255 D 3 7266 E 8 7285 F10 9250 B 5 9253 D 3 9273 C 4 9275 B 4 9289 D 6 9308 C 9 9318 E10 9338 D12 9355 D 5
1272 D13 2254 D 3 2263 E 2 2274 E 4 2285 C 5 2307 B 8 2321 B 2 2331 E10 3257 C 2 3270 D 5 3279 E 2 3288 E 8 3300 B 3 3309 E 3 3319 C 6 3336 F10 3353 D 2 3379 B 8 5253 D 5 6275 B 3 6293 B 3 6313 F10 6334 B 3 7256 D 3 7266 E 8 7285 F10 9250 F 2 9260 C 4 9275 B 4 9289 D 6 9308 C 9 9318 E10 9338 D12 9355 D 5

1 2 3 4 5 6 7 8 9 10 11 12 13 14

POWER UNIT

OUTPUT AND MAINS BOARD

B = 10V
E = 10V
C = -1V

B = -2.8V
E = -3.4V
C = -3.4V

B = 0
E = ⊥
C = 0.7V

B = 0.7V
E = ⊥
C = 0

B = -1V
E = 0
C = ⊥

B = -1V
E = 0
C = ⊥

B = -1V
E = 0
C = ⊥

B = -1V
E = 0
C = ⊥

B = -3.5V
E = -2.8V
C = -35V

B = -3.5V
E = -2.8V
C = -3.5V

B = 17V
E = 0
C = 2V

B = 1.2V
E = 65mV
C = 36V

B = -3.5V
E = -3V
C = -35V

B = -0.5V
E = -1.1V
C = 1.2V

B = -35V
E = -36V
C = 1.2V

B = -1.1V
E = -5mV
C = -36V

B = 14mV
E = 0
C = -1.8V

B = -35V
E = -36V
C = 1.2V

B = 1.2V
E = 5mV
C = 36V

B = 0.5V
E = -1.1V
C = 1.2V

B = 17mV
E = 0
C = 1.8V

B = -1.1V
E = 5mV
C = -36V

B = -12mV
E = 0
C = -1.8V

B = -14V
E = -14.6V
C = -14.5V

B = 16V
E = 14.5V
C = 37V

B = -26V
E = -25.5V
C = -37V

B = -15.3V
E = -14.6V
C = -37V

B = -21.5V
E = -20.8V
C = -37V

B = -20V
E = -20.8V
C = -21V

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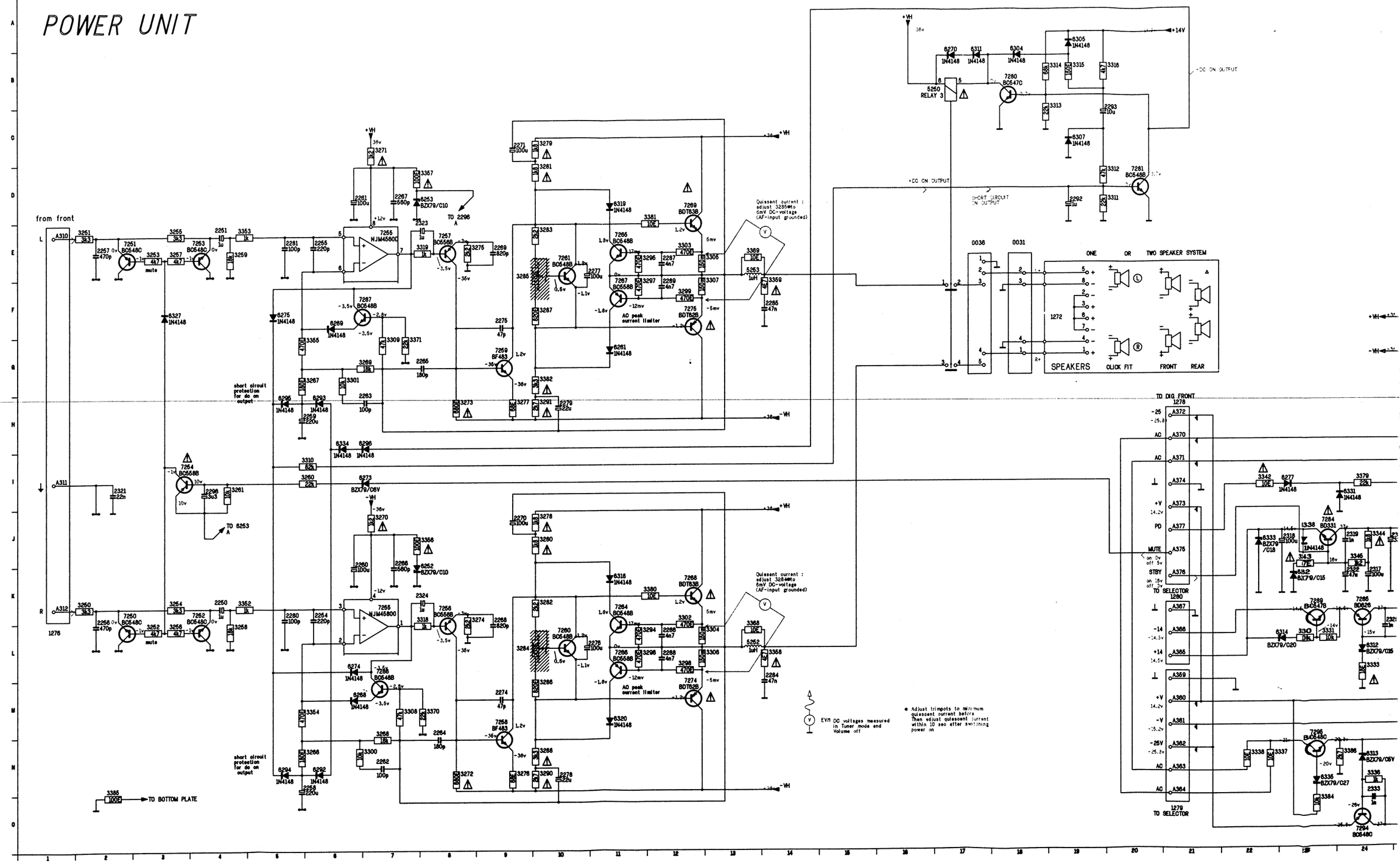
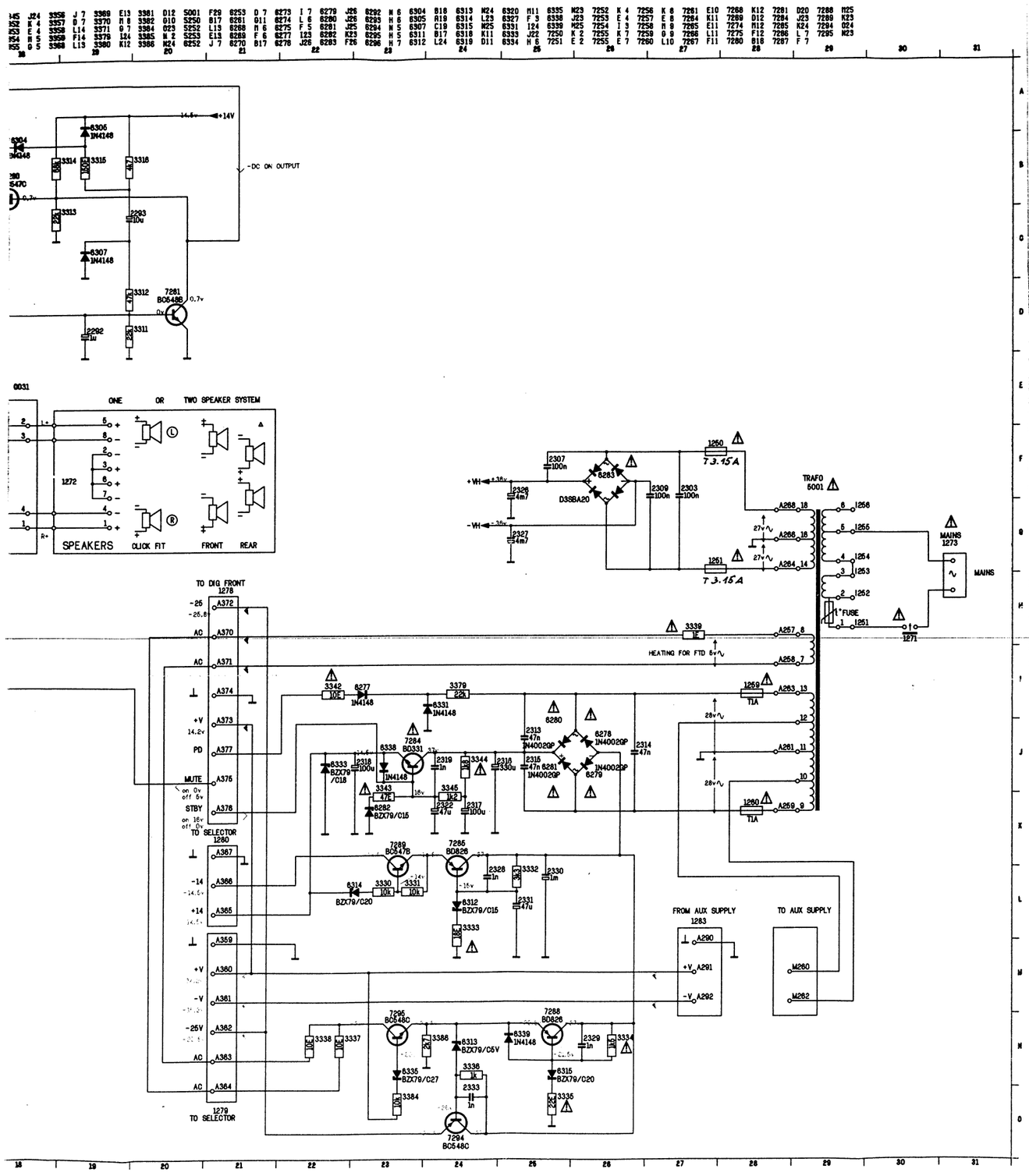
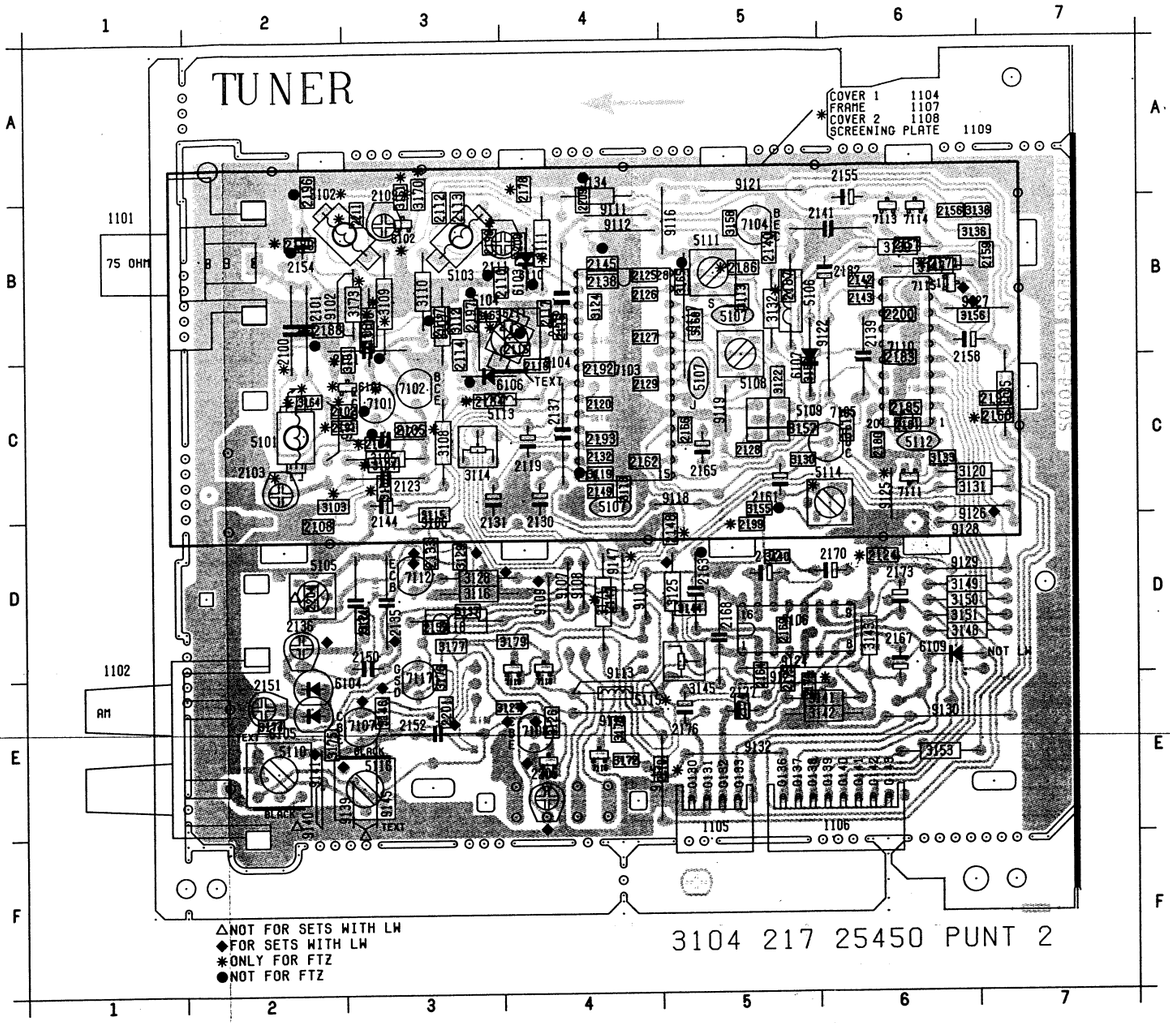
POWER UNIT


from front
short circuit protection for dc on output
AC peak current limiter
Quiescent current : adjust 3284etc to 5mV DC-voltage (AF-input grounded)
+DC ON OUTPUT
SHORT CIRCUIT ON OUTPUT
ONE OR TWO SPEAKER SYSTEM
SPEAKERS CLICK FIT FRONT REAR
TO BOTTOM PLATE
TO SELECTOR
EVM DC voltages measured in Tuner mode and Volume off
* Adjust trimpots to minimum quiescent current before. Then adjust quiescent current within 10 sec after switching power on



TUNER Adjustment table

Waverange	Input frequency	Input	Set tuned to	Adjust	Output	Scope / Voltmeter
VARICAP ALIGNMENT						
FM 87,5 - 108 MHz			108 MHz	5104	◇1	8V ± 50 mV
			87,5 MHz	check		2,7V ± 400 mV
AM (2-band version) 530 - 1700 kHz [1]			1700 kHz	2136		7,6V ± 100 mV
			530 kHz	check		1V ± 200 mV
LW 148 - 284 kHz			284 kHz	5105		8,4V ± 200 mV
MW (3-band version) 522 - 1611 kHz [2]			1611 kHz	2136		8,5V ± 100 mV
FM - RF [3]						
FM	87,5 MHz mod = 1 kHz Δf = 22,5 kHz	◇A	87,5 MHz	5103	◇2	max.
				5101 [4] 5102 [4]		
	108 MHz mod = 1 kHz Δf = 22,5 kHz		108 MHz	2111		
				2102 [4] 2109 [4]		
FM - IF						
FM	108 MHz Δf = 500 kHz as low as possible		108 MHz	5111		symmetrical and max. height
STEREO DECODER						
FM	98 MHz carrier 1 mV	◇A	98 MHz	3145	◇3	19 kHz ± 50 Hz
SEARCH SENSITIVITY						
FM	98 MHz carrier 12 µV	◇A	98 MHz	3114	◇4	adjust so that voltage switches from low to high
FM	98 MHz carrier 15 µV	◇A	99 MHz or 97 MHz	check		press DOWN or UP and check that set stops at 98 MHz
FM Autostore [5]	98 MHz carrier 350 µV	◇A	99 MHz or 97 MHz	check		press DOWN or UP and check that set stops at 98 MHz
AM - IF						
MW	522 kHz [6] Δf = 10 kHz as low as possible	◇B via 100nF	522 kHz	5108	◇2	symmetrical and max. height
AM - RF						
MW mod = 1 kHz 30% AM	558 kHz	◇C	558 kHz	5110	◇2	max.
	1494 kHz		1494 kHz	2151		
LW mod =1 kHz 30% AM	155 kHz		155 kHz	5116		max.
	270 kHz		270 kHz	2205		



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1105 E 5 2163 D 5 3124 B 4 5114 C 6
1106 E 6 2164 D 5 3125 D 5 5115 E 4
2100 B 2 2165 C 5 3126 E 4 5116 E 3
2101 B 2 2166 C 5 3127 E 4 5118 D 3
2102 C 3 2167 D 6 3128 D 3 6101 C 3
2103 C 2 2168 D 5 3129 D 3 6102 B 3
2104 C 3 2169 D 5 3130 C 5 6103 B 4
2105 C 3 2170 D 6 3131 C 6 6104 E 3
2106 B 3 2171 B 6 3132 B 5 6105 E 2
2107 B 3 2172 D 5 3133 C 6 6106 C 4
2108 D 2 2173 D 6 3134 A 4 6107 C 5
2109 A 3 2174 E 5 3135 C 7 6109 D 6
2110 B 4 2175 E 5 3136 B 7 6110 B 4
2111 B 3 2176 E 5 3137 D 3 6111 B 4
2112 B 3 2177 E 5 3138 B 7 7101 C 3
2113 B 3 2178 A 4 3139 B 6 7102 C 3
2114 B 3 2179 E 5 3140 D 5 7103 C 4
2115 B 4 2180 C 6 3141 E 6 7104 B 5
2116 B 4 2181 C 6 3142 E 6 7105 C 6
2117 B 4 2182 B 6 3143 D 6 7106 D 5
2118 C 4 2183 C 6 3144 D 5 7107 E 3
2119 C 4 2184 C 3 3145 E 5 7108 E 4
2120 C 4 2185 C 6 3146 E 3 7109 E 4
2121 C 3 2186 B 5 3147 B 6 7110 B 6
2122 C 3 2187 B 5 3148 D 6 7111 C 6
2123 C 3 2188 B 2 3149 D 6 7112 D 3
2124 D 6 2189 B 2 3150 D 6 7113 B 6
2125 B 4 2191 C 3 3151 D 6 7114 B 6
2126 B 4 2192 C 4 3153 E 6 7115 B 6
2127 B 4 2193 C 4 3155 C 5 7116 E 4
2128 C 5 2195 C 7 3156 B 6 7117 E 3
2129 C 4 2196 A 2 3157 C 5 7118 E 4
2130 D 4 2197 B 3 3158 B 5 7119 E 4
2131 D 3 2198 B 3 3160 B 5 9101 C 3
2132 C 4 2199 D 5 3161 A 3 9102 B 2
2133 D 3 2200 B 6 3162 C 5 9106 D 3
2134 D 3 2201 E 3 3163 B 3 9107 D 4
2135 D 3 2204 D 2 3164 C 2 9108 D 4
2136 D 2 2205 E 4 3165 B 5 9109 D 4
2137 C 4 2208 B 4 3170 A 3 9110 D 4
2138 B 4 2209 A 4 3171 D 4 9111 B 4
2139 B 6 2210 E 5 3172 E 4 9112 B 4
2140 B 5 2211 B 3 3173 B 3 9113 E 4
2141 B 6 3101 B 3 3174 E 2 9114 E 4
2142 B 6 3102 C 3 3175 E 2 9115 E 4
2143 B 6 3103 C 2 3176 D 3 9116 B 5
2144 D 3 3104 C 3 3177 D 3 9117 B 5
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2146 B 4 3106 B 3 3179 D 4 9119 C 5
2147 D 4 3107 B 3 5101 C 2 9121 A 5
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2149 C 4 3109 B 3 5103 B 3 9123 E 5
2150 D 3 3110 B 3 5104 B 3 9124 D 5
2151 E 2 3111 B 4 5104 C 4 9125 C 6
2152 E 3 3112 B 3 5105 D 2 9126 D 6
2153 D 3 3113 B 5 5106 B 5 9127 B 6
2154 B 2 3114 C 3 5107 C 4 9128 D 6
2155 A 6 3115 C 3 5107 B 5 9129 D 6
2156 B 6 3116 D 3 5107 C 5 9130 E 6
2157 B 6 3117 C 6 5108 C 5 9132 E 5
2158 C 6 3118 C 4 5109 C 5 9139 E 3
2159 B 7 3119 C 4 5110 E 2 9140 E 2
2160 C 7 3120 C 6 5111 B 5 9141 E 2

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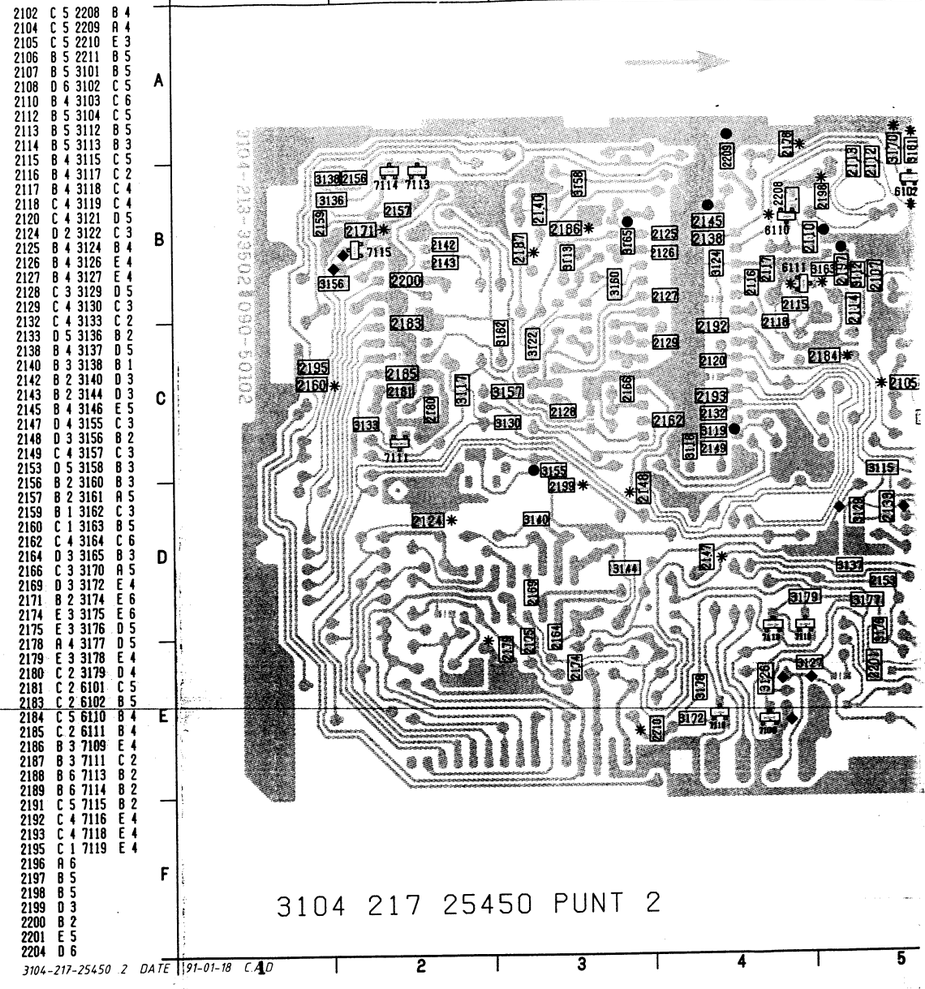

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2104 C 5 2209 A 4
2105 C 5 2210 E 3
2106 B 5 2211 B 5
2107 B 5 3101 B 5
2108 D 6 3102 C 5
2110 B 4 3103 C 6
2112 B 5 3104 C 5
2113 B 5 3112 B 5
2114 B 5 3113 B 3
2115 B 4 3115 C 5
2116 B 4 3117 C 2
2117 B 4 3118 C 4
2118 C 4 3119 C 4
2120 C 4 3121 D 5
2124 D 2 3122 C 3
2125 B 4 3124 B 4
2126 B 4 3126 E 4
2127 B 4 3127 E 4
2128 C 3 3129 D 5
2129 C 4 3130 C 3
2132 C 4 3133 C 2
2133 D 5 3136 B 2
2138 B 4 3137 D 5
2140 B 3 3138 B 1
2142 B 2 3140 D 3
2143 B 2 3144 D 3
2145 B 4 3146 E 5
2147 D 4 3155 C 3
2148 D 3 3156 B 2
2149 C 4 3157 C 3
2153 D 5 3158 B 3
2156 B 2 3160 B 3
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2166 C 3 3170 A 5
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2179 E 3 3178 E 4
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2181 C 2 6101 C 5
2183 C 2 6102 B 5
2184 C 5 6110 B 4
2185 C 2 6111 B 4
2186 B 3 7109 E 4
2187 B 3 7111 C 2
2188 B 6 7113 B 2
2189 B 6 7114 B 2
2191 C 5 7115 B 2
2192 C 4 7116 E 4
2193 C 4 7118 E 4
2195 C 1 7119 E 4
2196 A 6
2197 B 5
2198 B 5
2199 D 3
2200 B 2
2201 E 5
2204 D 6

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‡ Repeat
1) used in AUSTRALIA, CANADA and USA versions.
2) used in European versions.
3) For all sets except /02 adjust coil 5101 for nominal position (top of core approx. 3mm from topedge coil).
4) only for FTZ versions
5) Connect G136 to GND to switch set into Autostore sensitivity
6) via low impedance (5Ω) direct to pin 10 of 7103 (see fig. 1).

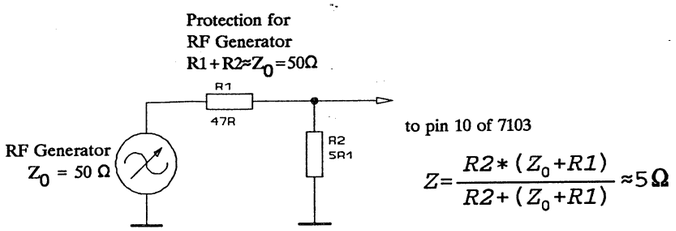


Fig. 1

TEND

FM-IF

FM-DET

BIRDY FILTER

STEREO DECODER

FM-OSCILLATOR

HERA IN FM

SEARCH LEVEL

TO AM-PART

SYNTHESIZER

LOOPFILTER

AM-IF

AM-DET

HERA IN AM

NOT FOR /10 /38

AM-25

TO SOURCE SELECTOR 1105

TO DIG FRONT 2 1106

AUDIO L Q130

GND Q131

AUDIO R Q132

SUPPLY Q133

AUTO STORE MUTE Q136

STEREO Q137

STOUT Q138

STRQ Q139

OE Q140

CLOCK Q141

DATA Q142

OPTION Q143

STEREO = LOW LEVEL

TUNED = HIGH LEVEL

Found strong signal during SEARCH

During communication with micro processor on frontpanel

-0v=NO communication

AM-LOW LEVEL

LW=LOW LEVEL

BASIC SETS C3 FR310 FR320 FR330

* NOT FOR FTZ

◆ FOR SETS WITH LW

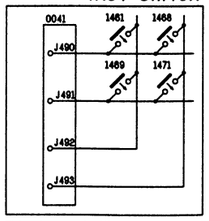
▲ NOT FOR SETS WITH LW

RF PART

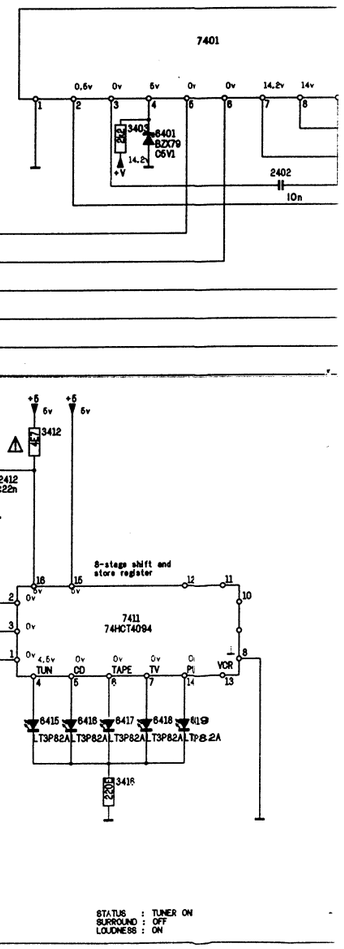
DIGITAL FRONT 2

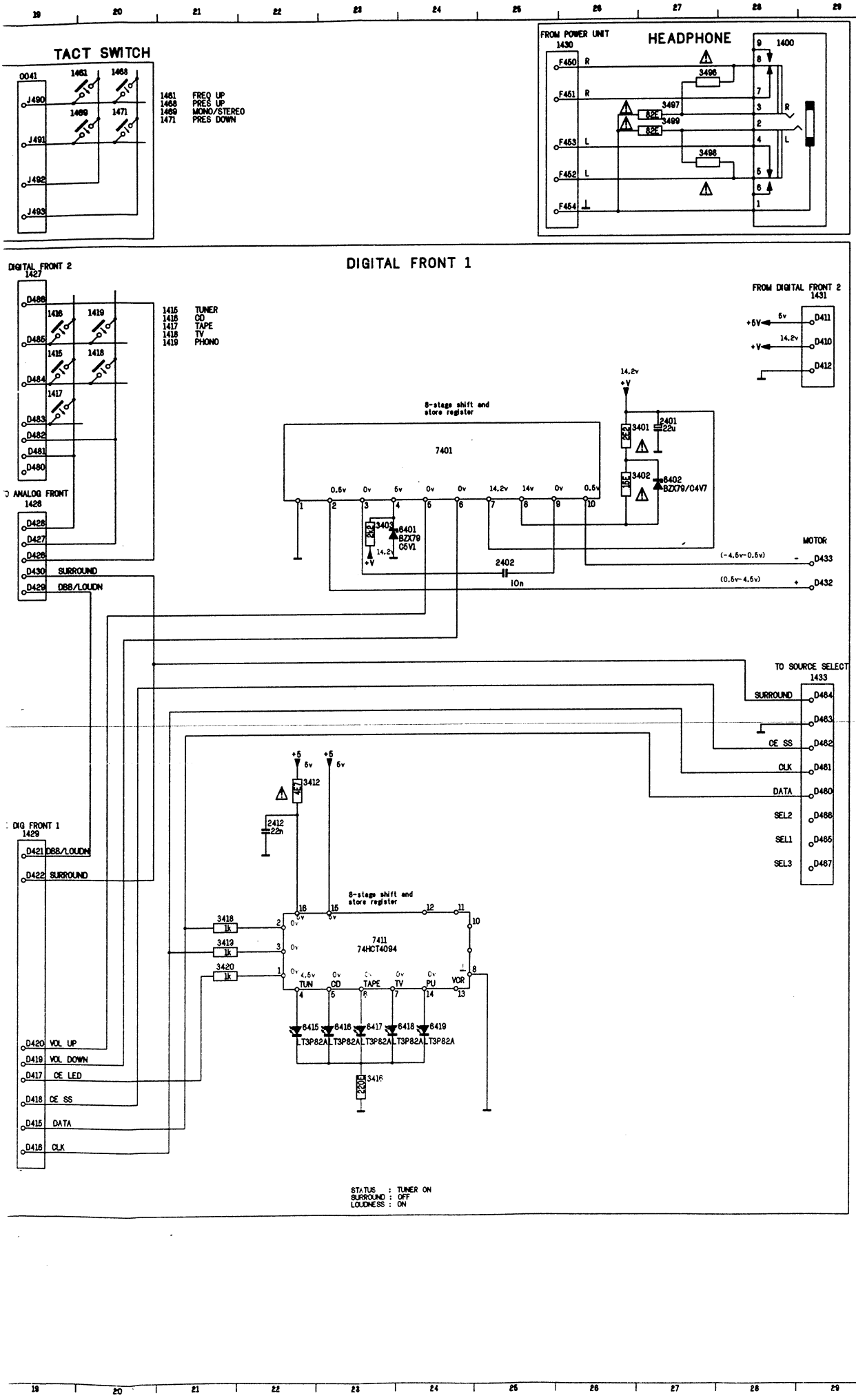
TO DIG FRONT 1 1421
FROM POWER 1422
TO SOURCE SELECT 1423
TO VOL LED
PART K
IR RECIEVER
TIMER OSC
OSC
INPUT PORT
I/O PORT R3
OUTP. PORT P2
I/O PORT R6
OUTP PORT P0
I/O PORT P7
OUTP PORT P1
I/O PORT R9
I/O PORT R8
OUTP. PORT P2
INP. PORT R8
CPU
VFT DRIVER CONTROL
7471 TMP470870
7481 ST24002 MEMORY CMOS SERIAL EPROM
7401
7411 74HCT4094
8-stage shift and store register
TO TACT SWITCH PANEL 0040
TO DIGITAL FRONT 1 1424
TO TUNER 1425
TO DIG FRONT 1 1426
TO DIGITAL FRONT 2 1427
TO ANALOG FRONT 1428
TO DIG FRONT 1 1429
1462 AUTO MEMO
1464 WAVE BAND
1466 FREQ DOWN
1466 AUTO SCAN
1467 MEMO 0/C
1481 FREQ UP
1468 PRES UP
1469 MONO/STEREO
1471 PRES DOWN
1415 TUNER
1416 CD
1417 TAPE
1418 TV
1419 PHONO
STEREO
STEREO SIGNAL
FIELD
STEREO REQUEST
CE LM7000
DATA
CLK
OPTION
DBB/LOUDN
SURROUND
VOL UP
VOL DOWN
CE LED
CE SS
DATA
CLK
SURROUND
DBB/LOUDN
MEMORY
MW LW
FM AM
TIMER
STEREO
KHzMHz
9-BT-79GK
STATUS : TUNER ON
SURROUND : OFF
LOUDNESS : ON

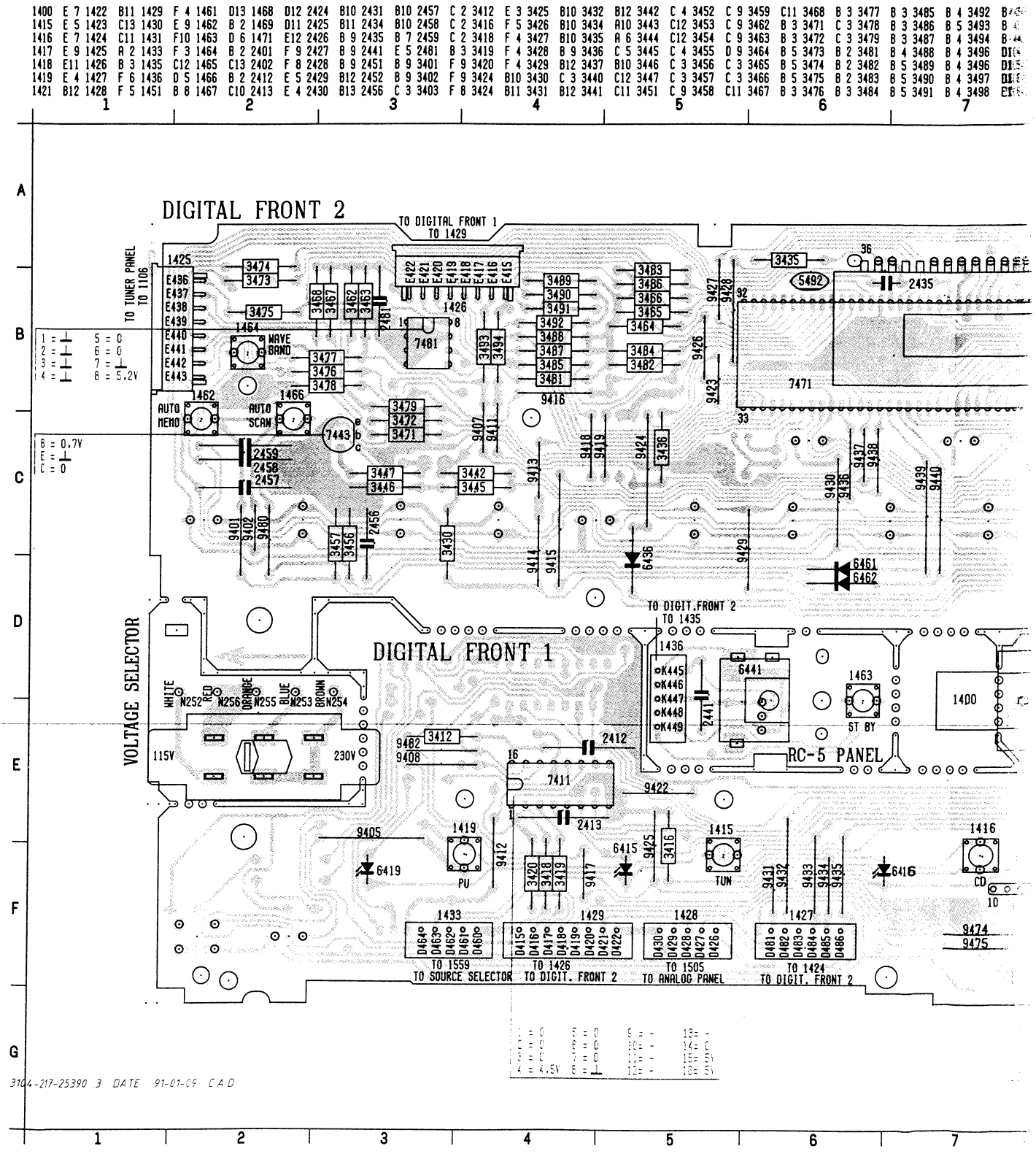
TACT SWITCH



DIGITAL FRONT 1

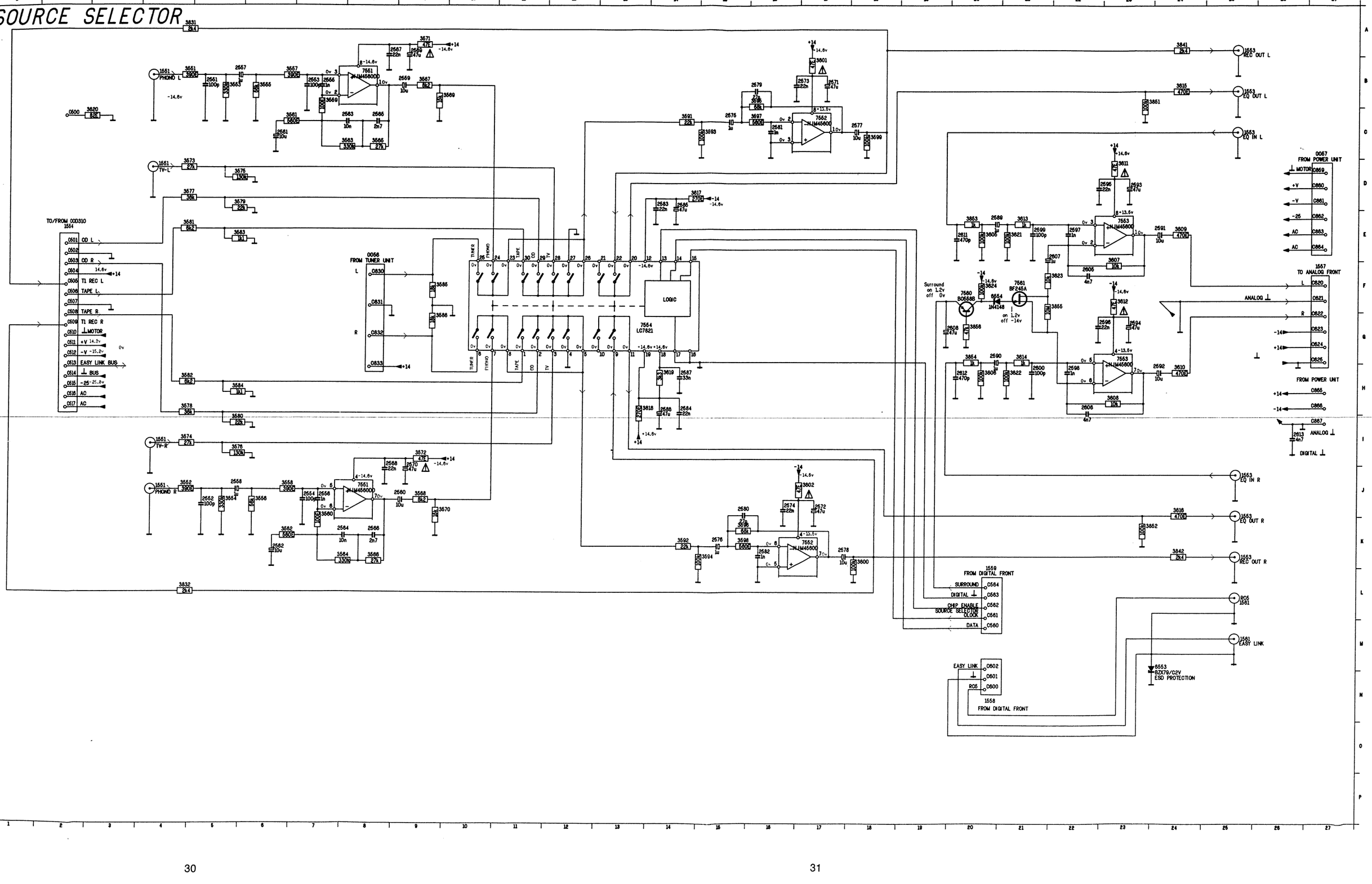



TACT SWITCH
1461 FREQ UP
1468 PRES UP
1469 MONO/STEREO
1471 PRES DOWN
HEADPHONE
FROM POWER UNIT
1430
1400
DIGITAL FRONT 1
DIGITAL FRONT 2
1427
1415 TUNER
1416 CD
1417 TAPE
1418 TV
1419 PHONO
FROM DIGITAL FRONT 2
1431
8-stage shift and store register
7401
14.2v
+V
2401 22u
3401
3402
6402 BZX79/C4V7
6401 BZX79 C6V1
3403
2402 10n
MOTOR
(-4.5v~0.5v)
(0.5v~4.5v)
D433
D432
ANALOG FRONT
1428
D430 SURROUND
D429 DBB/LOUDN
TO SOURCE SELECT
1433
SURROUND D464
CE SS D462
CLK D461
DATA D460
SEL2 D466
SEL1 D465
SEL3 D467
DIG FRONT 1
1429
D421 DBB/LOUDN
D422 SURROUND
3412
2412 22n
7411
74HCT4094
TUN CD TAPE TV PU VCR
6415 6418 6417 6418 6419
LT3P82A
3416 2200
D420 VOL UP
D419 VOL DOWN
D417 CE LED
D418 CE SS
D415 DATA
D416 CLK
STATUS : TUNER ON
SURROUND : OFF
LOUDNESS : ON


DIGITAL FRONT 2
TO DIGITAL FRONT 1
TO 1429
TO TUNER PANEL
TO 1106
DIGITAL FRONT 1
VOLTAGE SELECTOR
WHITE
RED
ORANGE
BLUE
BROWN
115V
230V
TO DIGIT.FRONT 2
TO 1435
RC-5 PANEL
ST BY
PU
TUN
CD
TO 1559
TO SOURCE SELECTOR
TO 1426
TO DIGIT. FRONT 2
TO 1505
TO ANALOG PANEL
TO 1424
TO DIGIT. FRONT 2
WAVE BAND
AUTO MEMO
AUTO SCAN
3104-217-25390 3 DATE 91-01-09 CAD

| | | |

SOURCE SELECTOR



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1551	F 8	3560	D 8	7560	C 4
1551	F 8	3561	E 8	7561	D 5
1553	F 4	3562	E 8	9550	C 2
1553	F 5	3563	E 7	9551	B 2
1553	F 5	3564	E 8	9552	B 2
1554	F 3	3565	D 7	9553	D 2
1557	B 3	3566	D 8	9556	C 3
1558	F 2	3567	D 5	9557	D 3
1559	B 4	3568	D 7	9559	F 3
1561	F 2	3569	E 5	9560	F 3
2551	E 8	3570	E 7	9561	D 3
2552	E 8	3571	C 8	9562	D 3
2553	D 8	3572	C 9	9563	F 3
2554	D 8	3573	E 5	9564	F 3
2555	D 8	3574	E 7	9566	F 3
2556	D 8	3575	E 5	9568	B 3
2557	E 8	3576	E 7	9569	B 3
2558	E 8	3577	E 5	9570	B 3
2559	C 8	3578	E 6	9571	E 3
2560	C 9	3579	E 6	9572	E 4
2561	E 7	3580	E 6	9573	E 4
2562	E 8	3581	E 6	9574	B 4
2563	D 7	3582	E 6	9575	B 4
2564	D 9	3583	E 6	9576	B 4
2565	D 7	3584	E 6	9578	B 4
2566	D 9	3585	E 5	9579	B 4
2567	C 8	3586	E 7	9580	E 4
2568	D 8	3591	C 6	9582	B 4
2569	C 8	3592	C 7	9583	B 4
2570	C 8	3593	C 6	9584	B 4
2571	B 6	3594	C 7	9585	E 4
2572	C 6	3595	B 6	9586	B 5
2573	B 7	3596	B 7	9587	D 5
2574	B 6	3597	B 6	9588	B 5
2575	C 6	3598	B 7	9589	E 5
2576	C 7	3599	C 5	9590	D 5
2577	B 5	3600	D 7	9591	C 5
2578	B 7	3601	B 7	9592	D 5
2579	B 6	3602	B 6	9593	B 5
2580	B 7	3605	F 4	9595	D 5
2581	B 6	3606	F 4	9596	E 5
2582	B 7	3607	D 3	9597	D 5
2583	D 6	3608	D 4	9598	C 5
2584	C 6	3609	C 3	9599	B 5
2585	C 6	3610	C 4	9600	C 6
2586	C 6	3611	D 4	9601	D 6
2587	C 5	3612	C 4	9602	F 6
2589	E 4	3613	E 4	9603	D 6
2590	E 4	3614	E 4	9604	E 6
2591	C 3	3615	F 5	9605	D 6
2592	C 4	3616	F 5	9606	E 6
2593	D 4	3617	C 5	9607	E 6
2594	C 3	3618	C 5	9608	C 6
2595	D 4	3619	D 6	9609	D 6
2596	D 4	3620	E 8	9611	C 6
2597	D 4	3621	E 3	9612	E 7
2598	D 4	3622	E 4	9614	D 7
2599	D 3	3623	E 4	9615	C 7
2600	D 4	3624	C 4	9616	C 7
2605	D 3	3831	D 2	9618	C 8
2606	D 4	3832	E 3	9619	C 8
2607	E 4	3841	C 2	9620	C 8
2608	C 4	3842	C 2	9621	B 8
2611	F 4	3851	D 5		
2612	F 4	3852	D 6		
2613	B 5	3853	F 4		
3551	E 8	3854	F 4		
3552	E 8	3855	D 4		
3553	E 8	3856	C 4		
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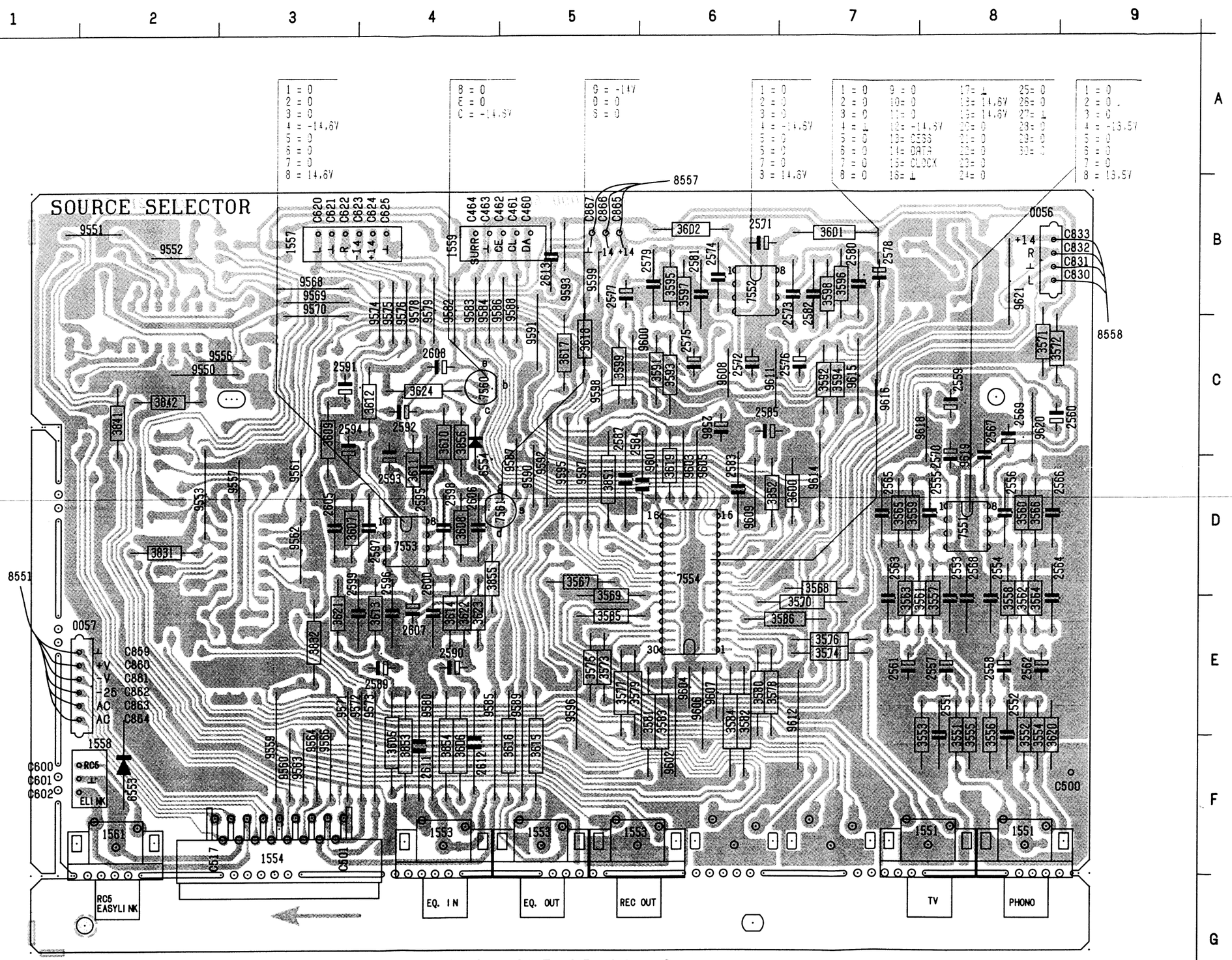
3557	E 8	7552	B 6		



3104-217-25480 3 DATE 91-01-09 CAD

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1501 B 2 1548 C10 2503 B 3 2507 B 5 2511 C 5 2517 C 4 2521 C 2 2547 C12 3504 C 5 3508 C 5 3514 C 4 3518 C 4 3524 C 4 3528 C 8 3534 C 2 3541 C 3 3546 B11 6501 B 2 6545 C12 6549 C11 7504 C 1 8501 D 6 9505 C 4 9511 C 7 9515 C 8

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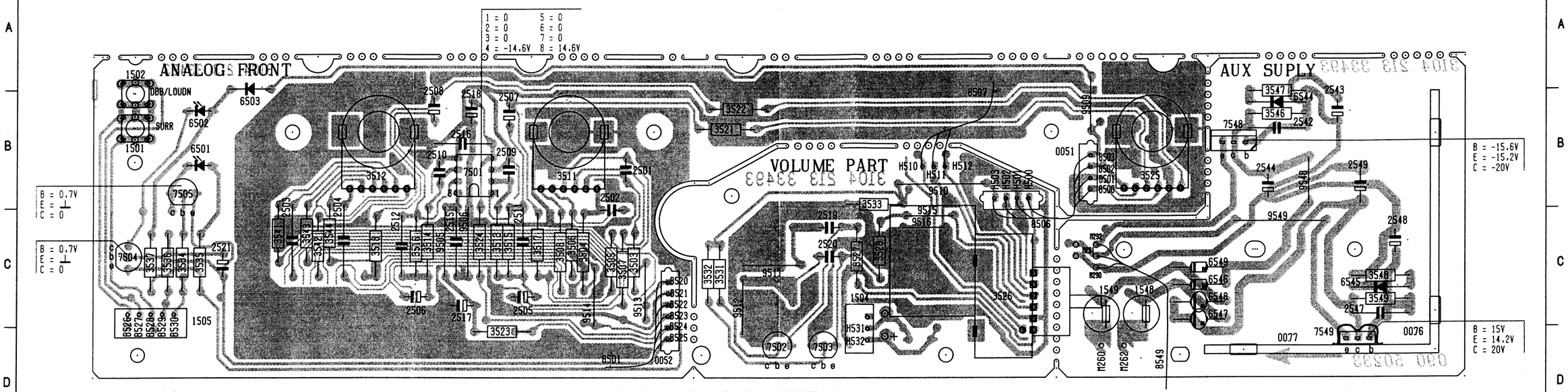
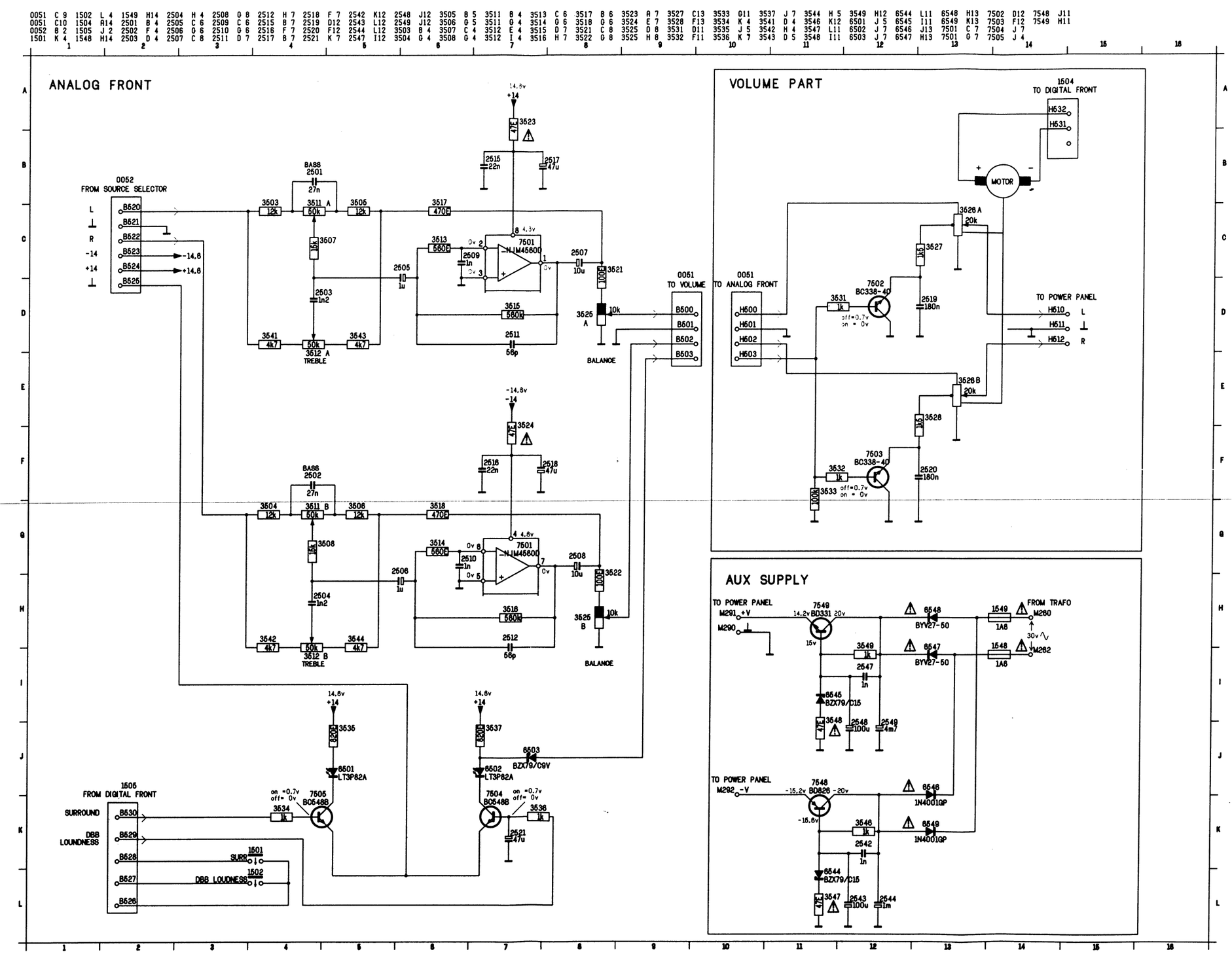
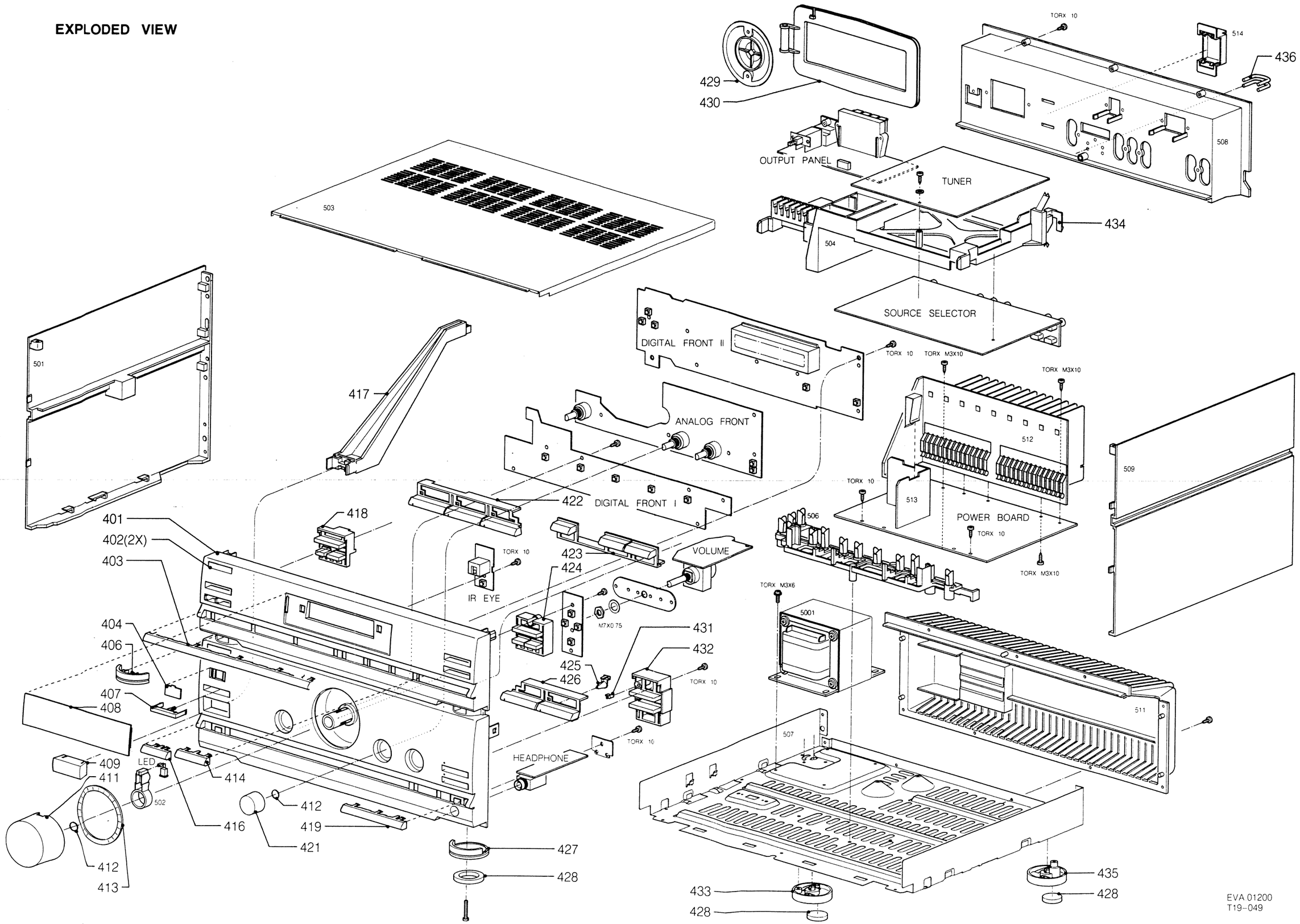


3104-217-25430 PUNT-3

3104-217-25430_3 DATE 91-01-09 C.A.D


ANALOG FRONT
VOLUME PART
AUX SUPPLY
0052
FROM SOURCE SELECTOR
L
R
-14
+14
B520
B521
B522
B523
B524
B525
-14.8
+14.8
BA88
2501
27n
3503
12k
3611 A
50k
3505
12k
3517
470E
3607
15k
2503
1n2
3541
4k7
3543
4k7
3612 A
TREBLE
2505
1u
3513
560E
2509
1n
7501
NJM4560D
2507
10u
3521
100E
3515
560E
2511
56p
3525 A
10k
BALANCE
0051
TO VOLUME
B500
B501
B502
B503
14.8v
+14
3523
47E
2515
22n
2517
47u
4.3v
0v
-14.8v
-14
3524
2516
22n
2518
47u
BA88
2502
3504
12k
3611 B
50k
3506
12k
3518
470E
3608
15k
2504
1n2
3542
4k7
3544
4k7
3612 B
TREBLE
2506
1u
3514
560E
2510
1n
7501
NJM4560D
2508
10u
3522
100E
3516
560E
2512
56p
3526 B
10k
BALANCE
4.8v
0v
3635
330E
6501
LT3P82A
3637
330E
6502
LT3P82A
6503
BZX79/C9V
1505
FROM DIGITAL FRONT
SURROUND
DBB LOUNDNESS
B530
B529
B528
B527
B526
1501
SURR
1502
DBB LOUNDNESS
on =0.7v
off= 0v
7505
BC548B
7504
BC548B
3534
1k
3536
1k
2521
47u
0051
TO ANALOG FRONT
H500
H501
H502
H503
1504
TO DIGITAL FRONT
H632
H631
MOTOR
3626 A
20k
3527
1k5
7502
BC338-40
3531
1k
2519
180n
TO POWER PANEL
H610
H611
H612
L
R
3626 B
20k
3528
1k5
7503
BC338-40
3532
1k
2520
180n
3533
100k
off=0.7v
on = 0v
TO POWER PANEL
M291 +V
M290
7549
BD331
14.2v
20v
15v
6548
BYV27-50
6547
BYV27-50
1549
1A6
1548
1A6
FROM TRAFO
M280
30v
M282
3549
1k
2547
1n
6545
BZX79/C15
3548
47E
2548
100u
2549
4m7
TO POWER PANEL
M292 -V
7548
BD826
-15.2v
-20v
-15.8v
6546
1N4001GP
6549
1N4001GP
3546
1k
2542
1n
6544
BZX79/C15
3547
47E
2543
100u
2544
1m

EXPLODED VIEW



EVA 01200
T19-049

MISCELLANEOUS

	4822 218 10389	REMOTE CONTROL (IR)	
	4822 267 10274	UHF SOCKET (for /05)	
1101	4822 267 31128	COAX,ANTENNA 75 OHM	
1102	4822 267 31306	TERMINAL (AM AERIAL)	
1250	4822 071 53152	FUSE T3,15A	
1251	4822 071 53152	FUSE T3,15A	
1259	4822 071 51002	FUSE T1A	
1260	4822 071 51002	FUSE T1A	
1271	4822 276 13055	SWITCH	
1272	4822 267 31308	TERMINAL (2xSPEAKER)	
1273	4822 265 20291	MAINS SOCKET	
1400	4822 267 30968	PHONE SOCKET	
1415	4822 276 13066	TACT SWITCH	
1416	4822 276 13066	TACT SWITCH	
1417	4822 276 13066	TACT SWITCH	
1418	4822 276 13066	TACT SWITCH	
1419	4822 276 13066	TACT SWITCH	
1451	4822 130 90953	DISPLAY (FTD)	
	4822 256 91755	DISPLAY HOLDER	
1461	4822 276 13066	TACT SWITCH	
1462	4822 276 13066	TACT SWITCH	
1463	4822 276 13066	TACT SWITCH	
1464	4822 276 13066	TACT SWITCH	
1465	4822 276 13066	TACT SWITCH	
1466	4822 276 13066	TACT SWITCH	
1467	4822 276 13066	TACT SWITCH	
1468	4822 276 13066	TACT SWITCH	
1469	4822 276 13066	TACT SWITCH	
1471	4822 276 13066	TACT SWITCH	
1501	4822 276 13066	TACT SWITCH	
1502	4822 276 13066	TACT SWITCH	
1548	4822 071 51602	FUSE T1.6A	
1549	4822 071 51602	FUSE T1.6A	
1551	4822 266 30293	CHINCH SOCKET	
1554	4822 267 31307	CHINCH SOCKET	
1561	4822 267 20416	CHINCH SOCKET PLATE	
5001	4822 146 30973	MAINS TRANSFORMER	
5250	4822 280 70366	RELAY MINIAT. 36V DC	

DIODES

	4822 130 82489	GL2PR9 (LED RED)		4822 130 34233	BZX79-B5V1
	4822 130 81643	BB804		5322 130 31504	BZX79-C20
	5322 130 31684	BB809		4822 130 31024	BZX79-C18
	4822 130 81673	1SV149(B)		4822 130 34379	BZX79-C27
	4822 130 34174	BZX79-C4V7		4822 130 81007	LED LT3P82A
	4822 130 30621	1N4148		4822 130 81254	IR-EYE
	4822 130 61219	BZX79-C10		4822 130 30862	BZX79-C9V1
	4822 130 34167	BZX79-C6V2		4822 130 31438	1N4001
	5322 130 30684	1N4002		5322 130 32184	BYV27-50
	4822 130 34281	BZX79-C15		4822 130 31253	BZX79-C2V4
	4822 130 82079	D3SBA20			

TRANSISTORS

	4822 130 60163	2SC1047		4822 130 42607	BF483
	4822 130 60093	2SA838B		5322 130 42363	BDT63B
	4822 130 44154	BF199		5322 130 44926	BDT62B
	4822 130 40937	BC548B		4822 130 44503	BC547C
	5322 130 44779	BC338-40		4822 130 42629	BD331
	5322 130 41982	BC848		4822 130 41774	BD826
	4822 130 41024	BF245B		4822 130 40959	BC547B
	4822 130 44196	BC548C		4822 130 40824	BD136
	4822 130 44197	BC558B		4822 130 40823	BD135
	4822 130 41691	BC556B			

INTEGRATED CIRCUITS

	4822 209 72744	CXA1240P		4822 209 61522	PC74HCT4094P
	4822 209 71321	AN7411		4822 209 63666	uP
	4822 209 71331	LM7000		4822 209 62098	ST24C02CP
	4822 209 83274	NJM4560D		4822 209 70157	NJM4560DD
	4822 209 63667	BA6229 MOTOR DRIVER		4822 209 72748	LC7821

COILS

5101	4822 156 30947	RF COIL 1,5 TURNS	5110	4822 157 63159	MW AERIAL (ONLY /01)
5102	4822 156 30947	RF COIL 1,5 TURNS	5111	4822 157 63028	FM IF (NOT /02)
5103	4822 156 30947	RF COIL 1,5 TURNS	5111	4822 157 63163	FM IF (ONLY /02)
5104	4822 157 60284	NOT FOR /02	5112	4822 242 72976	QUARTZ 2,7MHz
5104	4822 157 53199	ONLY FOR /02	5113	4822 157 60147	COIL 2,2uH
5105	4822 157 63031	AM OSC. (NOT /01)	5114	4822 158 60509	BIRDY FILTER
5105	4822 157 63158	AM OSC (ONLY /01)	5115	4822 157 60147	COIL 2,2uH
5106	4822 157 53192	0,22uH	5116	4822 157 63032	LW AERIAL COIL
5107	4822 242 72096	CER.FILT.KIT 10,7MHz	5118	4822 152 20699	560uH
5108	4822 157 63029	AM IF COIL	5252	4822 157 62255	COIL 18,5 TURNS
5109	4822 242 71878	CERAM.RES. 450kHz	5253	4822 157 62255	COIL 18,5 TURNS
5110	4822 157 63033	MW AERIAL (NOT /01)	5492	4822 242 73769	CER.RES. 4,194MHz

RESISTORS

3105	4822 050 23901	390R	1%	0,6W	3267	4822 050 21801	180R	1%	0,6W
3106	4822 116 52224	470R	5%	0,5W	3268	4822 050 21803	18k	1%	0,6W
3107	4822 116 52921	4k7	1%	0,6W	3269	4822 050 21803	18k	1%	0,6W
3111	4822 050 24703	47k	1%	0,6W	3270	4822 053 10122	1k2	5%	1W
3114	4822 100 11141	10k TRIM POT			3271	4822 053 10122	1k2	5%	1W
3116	4822 050 22201	220R	2%	0,25W	3272	4822 052 10681	680R	5%	0,33W
3120	4822 050 23903	39k	1%	0,6W	3273	4822 052 10681	680R	5%	0,33W
3125	4822 116 52921	4k7	1%	0,6W	3274	4822 050 22202	2k2	1%	0,6W
3128	4822 116 52921	4k7	1%	0,6W	3275	4822 050 22202	2k2	1%	0,6W
3131	4822 050 23301	330R	2%	0,25W	3276	4822 050 16809	68R	1%	0,4W
3132	4822 050 26801	680R	1%	0,6W	3277	4822 050 16809	68R	1%	0,4W
3134	4822 116 52921	4k7	1%	0,6W	3278	4822 053 12182	1k8	5%	3W
3135	4822 050 22201	220R	2%	0,25W	3279	4822 053 12182	1k8	5%	3W
3139	4822 116 52921	4k7	1%	0,6W	3280	4822 050 21802	1k8	1%	0,6W
3142	4822 050 22201	220R	2%	0,25W	3281	4822 050 21802	1k8	1%	0,6W
3143	4822 051 10223	22k	2%	0,25W	3282	4822 050 22202	2k2	1%	0,6W
3145	4822 100 11141	10k TRIM POT			3283	4822 050 22202	2k2	1%	0,6W
3147	4822 050 22201	220R	2%	0,25W	3284	4822 101 10927	470R POTMETER		
3149	4822 050 21002	1k	1%	0,6W	3285	4822 101 10927	470R POTMETER		
3150	4822 050 21002	1k	1%	0,6W	3286	4822 050 28201	820R	1%	0,6W
3151	4822 050 21002	1k	1%	0,6W	3287	4822 050 28201	820R	1%	0,6W
3153	4822 050 21002	1k	1%	0,6W	3288	4822 050 23302	3k3	1%	0,6W
3171	4822 050 26801	680R	1%	0,6W	3290	4822 053 10272	2k7	5%	1W
3173	4822 050 21002	1k	1%	0,6W	3291	4822 053 10272	2k7	5%	1W
3250	4822 050 23302	3k3	1%	0,6W	3294	4822 116 52224	470R	5%	0,5W
3251	4822 050 23302	3k3	1%	0,6W	3295	4822 116 52224	470R	5%	0,5W
3252	4822 116 52921	4k7	1%	0,6W	3296	4822 116 52224	470R	5%	0,5W
3253	4822 116 52921	4k7	1%	0,6W	3297	4822 116 52224	470R	5%	0,5W
3254	4822 050 23302	3k3	1%	0,6W	3298	4822 116 52224	470R	5%	0,5W
3255	4822 050 23302	3k3	1%	0,6W	3299	4822 116 52224	470R	5%	0,5W
3256	4822 116 52921	4k7	1%	0,6W	3302	4822 116 52224	470R	5%	0,5W
3257	4822 116 52921	4k7	1%	0,6W	3303	4822 116 52224	470R	5%	0,5W
3258	4822 050 21803	18k	1%	0,6W	3304	4822 113 80525	0R15	10%	3W
3259	4822 050 21803	18k	1%	0,6W	3305	4822 113 80525	0R15	10%	3W
3260	4822 051 10223	22k	2%	0,25W	3306	4822 113 80525	0R15	10%	3W
3266	4822 050 21801	180R	1%	0,6W	3307	4822 113 80525	0R15	10%	3W

MECHANICAL PARTS

401	4822 426 51465	FRONT PRINTED
402	4822 459 10887	WORDMARK "PHILIPS"
403	4822 454 12703	FAKE STRIP PRESETS
404	4822 450 61675	WINDOW REMOTE
406	4822 462 71743	FOOT TUNER
407	4822 410 61099	BUTTON STAND BY
408	4822 450 61676	WINDOW TUNER
409	4822 410 61098	CAP POWER BUTTON
411	4822 411 61765	KNOB VOLUME
412	4822 492 63086	SPRING KNOB FIXATION
413	4822 450 61677	WINDOW VOLUME
414	4822 410 61093	FAKE BUTTON TUNER
416	4822 410 61094	FAKE BUTTON SELECTOR
417	4822 535 93188	POWER ROD
418	4822 417 11131	BUTTON WAVE BAND
419	4822 410 61095	FAKE BUTTON VCR
421	4822 413 51364	KNOB (BASS TREB BAL)
422	4822 417 11135	KNOB PHONO/TUNER/CD
423	4822 417 11133	BUTTON MEMORY/FREQU.
424	4822 417 11134	BUTTON MONO/STEREO
425	4822 466 70717	LIGHT DIFFUSOR SELEC
426	4822 417 11136	BUTTON TAPE/TV
427	4822 462 71744	FOOT (AMPLIFIER)
428	4822 462 41783	RUBBER FOOT BACK/FRO
429	4822 462 71749	LOOP ANTENNA FOOT
430	4822 303 40055	AM FRAME AERIAL
431	4822 466 70716	LIGHT DIFFUSOR SURR.
432	4822 417 11132	BUTTON SURROUND
433	4822 462 41784	FOOT REARSIDE LEFT
434	4822 492 70854	EARTH SPRING
435	4822 462 41785	FOOT REARSIDE RIGHT
436	4822 404 21141	EQUALIZER BRIDGE
	4822 321 10249	MAINSCORD SET EUROPE
	4822 321 10561	MAINSCORD SET GB
	4822 321 10523	MAINSCORD AUSTRALIA

RESISTORS

3854	4822	050	21002	1k	1%	0,6W	3856	4822	050	24703	47k	1%	0,6W
3855	4822	050	21006	10M	1%	0,6W							

CHIP RESISTORS

3101	4822	051	20473	47k	5%	0,1W	3165	4822	051	20473	47k	5%	0,1W
3102	4822	051	20333	33k	5%	0,1W	3170	4822	051	10008	JUMPER		
3103	4822	051	10472	4k7	2%	0,25W	3172	4822	051	20223	22k	5%	0,1W
3104	4822	051	10102	1k	2%	0,25W	3174	4822	051	10102	1k	2%	0,25W
3108	4822	051	10122	1k2	2%	0,25W	3175	4822	051	10331	330R	2%	0,25W
3109	4822	051	10101	100R	2%	0,25W	3176	4822	051	20271	270R	5%	0,1W
3110	4822	051	10101	100R	2%	0,25W	3177	4822	051	10151	150R	2%	0,25W
3112	4822	051	20562	5k6	5%	0,1W	3178	4822	051	20223	22k	5%	0,1W
3112	4822	051	20008	CHIP JUMPER			3179	4822	051	10472	4k7	2%	0,25W
3113	4822	051	20689	68R	5%	0,1W	3261	4822	051	10103	10k	2%	0,25W
3115	4822	051	10479	47R			3300	4822	051	10103	10k	2%	0,25W
3117	4822	051	10103	10k	2%	0,25W	3301	4822	051	10103	10k	2%	0,25W
3118	4822	051	20271	270R	5%	0,1W	3330	4822	051	10103	10k	2%	0,25W
3119	4822	051	20273	27k	5%	0,1W	3331	4822	051	10103	10k	2%	0,25W
3121	4822	051	20104	100k	5%	0,1W	3356	4822	051	10101	100R	2%	0,25W
3122	4822	051	10272	2k7	2%	0,25W	3357	4822	051	10101	100R	2%	0,25W
3124	4822	051	10008	JUMPER			3384	4822	051	10103	10k	2%	0,25W
3126	4822	051	10472	4k7	2%	0,25W	3385	4822	051	10101	100R	2%	0,25W
3127	4822	051	20472	4k7	5%	0,1W	3427	4822	051	10103	10k	2%	0,25W
3129	4822	051	20104	100k	5%	0,1W	3432	4822	051	10103	10k	2%	0,25W
3130	4822	051	20104	100k	5%	0,1W	3445	4822	051	10103	10k	2%	0,25W
3133	4822	051	20223	22k	5%	0,1W	3446	4822	051	10103	10k	2%	0,25W
3136	4822	051	10153	15k	2%	0,25W	3456	4822	051	10103	10k	2%	0,25W
3137	4822	051	20562	5k6	5%	0,1W	3457	4822	051	10103	10k	2%	0,25W
3138	4822	051	20472	4k7	5%	0,1W	3458	4822	051	10103	10k	2%	0,25W
3140	4822	051	10102	1k	2%	0,25W	3459	4822	051	10103	10k	2%	0,25W
3141	4822	051	10103	10k	2%	0,25W	3467	4822	051	10103	10k	2%	0,25W
3144	4822	051	20183	18k	5%	0,1W	3513	4822	051	10561	560R	2%	0,25W
3146	4822	051	10821	820R	2%	0,25W	3514	4822	051	10561	560R	2%	0,25W
3148	4822	051	10103	10k	2%	0,25W	3559	4822	051	10101	100R	2%	0,25W
3155	4822	051	20332	3k3	5%	0,1W	3560	4822	051	10101	100R	2%	0,25W
3156	4822	051	10103	10k	2%	0,25W	3561	4822	051	10561	560R	2%	0,25W
3157	4822	051	10008	JUMPER			3562	4822	051	10561	560R	2%	0,25W
3158	4822	051	20104	100k	5%	0,1W	3597	4822	051	10561	560R	2%	0,25W
3160	4822	051	10008	JUMPER			3598	4822	051	10561	560R	2%	0,25W
3161	4822	051	20473	47k	5%	0,1W	3607	4822	051	10103	10k	2%	0,25W
3162	4822	051	20479	47R	5%	0,1W	3608	4822	051	10103	10k	2%	0,25W
3163	4822	051	20562	5k6	5%	0,1W	3623	4822	051	10103	10k	2%	0,25W
3164	4822	051	20008	CHIP JUMPER									

CAPACITORS

2100	4822	122	31555	120pF	5%	50V	2111	4822	125	50355	4,2-20pF	(only/02)	
2101	4822	122	10179	33pF	5%	50V	2115	5322	122	32481	15pF	5%	50V
2103	4822	125	50355	4,2-20pF	VARIABLE		2116	5322	122	32481	15pF	(not /02)	
2109	4822	125	50355	4,2-20pF	VARIABLE		2117	5322	122	32967	5,6pF	(not /02)	
2111	4822	125	60102	30pF	var.	(not/02)	2119	4822	124	41554	220uF	20%	10V

CAPACITORS

2121	4822	122	31435	470pF	10%	50V	2263	4822	122	10183	100pF	5%	50V
2122	4822	122	31385	22pF	5%	50V	2264	4822	126	11307	180pF	10%	500V
2123	4822	122	31555	120pF	5%	50V	2265	4822	126	11307	180pF	10%	500V
2128	5322	122	32967	5,6pF	5%	50V	2266	4822	122	31693	560pF	10%	50V
2130	4822	124	40178	100uF	20%	10V	2267	4822	122	31693	560pF	10%	50V
2131	4822	124	40244	2,2uF	20%	63V	2268	4822	122	10173	820pF	10%	50V
2134	5322	121	50999	470pF	(not	/01)	2269	4822	122	10173	820pF	10%	50V
2134	4822	121	51381	560pF	(only	/01)	2270	4822	124	41525	100uF	20%	25V
2135	4822	121	43253	360pF	1%	400V	2271	4822	124	41525	100uF	20%	25V
2136	4822	125	60101	10pF	VARIABLE		2274	4822	126	11308	47pF	5%	500V
2137	4822	122	10436	6,8pF	10%	50V	2275	4822	126	11308	47pF	5%	500V
2139	4822	122	10166	22nF	30%	16V	2276	4822	124	40178	100uF	20%	10V
2141	4822	122	31385	22pF	5%	50V	2277	4822	124	40178	100uF	20%	10V
2144	4822	124	41554	220uF	20%	10V	2278	4822	124	22633	22uF	20%	35V
2146	4822	122	32096	4,7pF	10%	50V	2279	4822	124	22633	22uF	20%	35V
2150	4822	121	42408	220nF	5%	63V	2280	4822	122	10183	100pF	5%	50V
2151	4822	125	60101	10pF	VARIABLE		2281	4822	122	10183	100pF	5%	50V
2151	4822	125	60102	30pF	VARIABLE		2284	5322	121	42491	47nF	5%	100V
2152	4822	121	43861	56pF	1%	63V	2285	5322	121	42491	47nF	5%	100V
2154	4822	121	42408	220nF	5%	63V	2286	4822	126	11311	4,7nF		50V
2155	4822	124	41631	1,5uF	20%	50V	2287	4822	126	11311	4,7nF		50V
2158	4822	124	40196	220uF	20%	16V	2288	4822	126	11311	4,7nF		50V
2161	4822	124	40246	4,7uF	20%	63V	2289	4822	126	11311	4,7nF		50V
2163	4822	122	10173	820pF	10%	50V	2292	4822	124	40242	1uF	20%	63V
2165	4822	124	40242	1uF	20%	63V	2293	4822	124	40248	10uF	20%	63V
2167	4822	124	41643	100uF	20%	16V	2296	4822	124	40749	3,3uF	20%	63V
2168	5322	121	50999	470pF	1%	400V	2303	4822	121	42007	100nF	10%	100V
2170	4822	124	40239	0,47uF	20%	63V	2307	4822	121	42007	100nF	10%	100V
2172	4822	124	41987	0,22uF	20%	63V	2309	4822	121	42007	100nF	10%	100V
2173	4822	124	40246	4,7uF	20%	63V	2313	5322	121	42491	47nF	5%	100V
2176	4822	124	40242	1uF	20%	63V	2314	5322	121	42491	47nF	5%	100V
2177	4822	124	40242	1uF	20%	63V	2315	5322	121	42491	47nF	5%	100V
2180	5322	122	32965	18pF	5%	50V	2316	4822	124	42116	330uF	20%	50V
2181	5322	122	32481	15pF	5%	50V	2317	5322	124	21189	100uF	20%	40V
2182	4822	124	40242	1uF	20%	63V	2318	4822	124	41643	100uF	20%	16V
2198	5322	122	32481	15pF	5%	50V	2319	4822	122	10158	1nF	10%	50V
2204	4822	122	32596	TRIM CAP	5,2pF-30pF		2321	4822	122	10166	22nF	30%	16V
2205	4822	125	60102	30pF	VARIABLE		2322	4822	124	40433	47uF	20%	25V
2209	5322	122	32481	15pF	5%	50V	2323	4822	124	40242	1uF	20%	63V
2250	4822	124	40242	1uF	20%	63V	2324	4822	124	40242	1uF	20%	63V
2251	4822	124	40242	1uF	20%	63V	2326	4822	124	42117	4700uF	20%	50V
2254	4822	122	10172	220pF	10%	50V	2327	4822	124	42117	4700uF	20%	50V
2255	4822	122	10172	220pF	10%	50V	2328	4822	122	10158	1nF	10%	50V
2256	4822	122	31435	470pF	10%	50V	2329	4822	122	10158	1nF	10%	50V
2257	4822	122	31435	470pF	10%	50V	2330	4822	124	42125	1000uF	20%	50V
2258	4822	124	41554	220uF	20%	10V	2331	4822	124	40433	47uF	20%	25V
2259	4822	124	41554	220uF	20%	10V	2333	4822	122	10158	1nF	10%	50V
2260	4822	124	41643	100uF	20%	16V	2401	4822	124	41678	22uF	20%	25V
2261	4822	124	41643	100uF	20%	16V	2402	4822	122	10177	10nF	20%	25V
2262	4822	122	10183	100pF	5%	50V	2412	4822	122	10166	22nF	30%	16V

RESISTORS

3308	4822 050 24703	47k	1%	0,6W
3309	4822 050 24703	47k	1%	0,6W
3310	4822 116 52866	82k	1%	0,6W
3311	4822 051 10223	22k	2%	0,25W
3312	4822 050 24703	47k	1%	0,6W
3313	4822 051 10223	22k	2%	0,25W
3314	4822 050 26803	68k	1%	0,6W
3315	4822 050 21501	150R	1%	0,6W
3316	4822 116 52921	4k7	1%	0,6W
3318	4822 050 21002	1k	1%	0,6W
3319	4822 050 21002	1k	1%	0,6W
3332	4822 050 23302	3k3	1%	0,6W
3333	4822 116 80562	10R	5%	NFR
3334	4822 050 21502	1k5	1%	0,6W
3335	4822 116 80335	47R	5%	NFR
3336	4822 050 21002	1k	1%	0,6W
3337	4822 053 10109	10R	5%	1W
3338	4822 053 10109	10R	5%	1W
3339	4822 052 10108	1R	5%	0,33W
3342	4822 116 80562	10R	5%	NFR
3343	4822 116 80335	47R	5%	NFR
3344	4822 050 21802	1k8	1%	0,6W
3345	4822 050 21202	1k2	1%	0,6W
3352	4822 050 21002	1k	1%	0,6W
3353	4822 050 21002	1k	1%	0,6W
3354	4822 116 52224	470R	5%	0,5W
3355	4822 116 52224	470R	5%	0,5W
3358	4822 116 80311	4,7R	5%	NFR
3359	4822 116 80311	4,7R	5%	NFR
3368	4822 116 80562	10R	5%	NFR
3369	4822 116 80562	10R	5%	NFR
3370	4822 051 10223	22k	2%	0,25W
3371	4822 051 10223	22k	2%	0,25W
3379	4822 051 10223	22k	2%	0,25W
3380	4822 116 80562	10R	5%	NFR
3381	4822 116 80562	10R	5%	NFR
3382	4822 050 23302	3k3	1%	0,6W
3386	4822 116 52263	2k7	5%	0,5W
3401	4822 116 82366	2R2	5%	
3402	4822 053 10159	15R	5%	1W
3412	4822 116 80311	4,7R	5%	NFR
3416	4822 051 10221	220R	2%	0,25W
3418	4822 050 21002	1k	1%	0,6W
3419	4822 050 21002	1k	1%	0,6W
3420	4822 050 21002	1k	1%	0,6W
3424	4822 053 11109	10R	5%	2W
3425	4822 050 22202	2k2	1%	0,6W
3426	4822 050 14709	47R	1%	0,4W
3428	4822 116 52234	100k	5%	0,5W
3429	4822 050 25603	56k	1%	0,6W
3430	4822 116 52921	4k7	1%	0,6W
3431	4822 050 22202	2k2	1%	0,6W
3434	4822 116 80311	4,7R	5%	NFR
3435	4822 116 80311	4,7R	5%	NFR
3436	4822 116 52921	4k7	1%	0,6W
3440	4822 050 24703	47k	1%	0,6W
3441	4822 050 24703	47k	1%	0,6W
3442	4822 116 52921	4k7	1%	0,6W
3443	4822 050 24703	47k	1%	0,6W
3444	4822 050 21803	18k	1%	0,6W
3447	4822 050 23301	330R	2%	0,25W
3451	4822 050 24703	47k	1%	0,6W
3452	4822 050 24703	47k	1%	0,6W
3453	4822 116 52921	4k7	1%	0,6W
3454	4822 050 24703	47k	1%	0,6W
3455	4822 050 21803	18k	1%	0,6W
3462	4822 116 52921	4k7	1%	0,6W
3463	4822 116 52921	4k7	1%	0,6W
3464	4822 116 52921	4k7	1%	0,6W
3465	4822 116 52921	4k7	1%	0,6W
3466	4822 116 52921	4k7	1%	0,6W
3468	4822 050 22704	270k	1%	0,6W
3471	4822 050 21002	1k	1%	0,6W
3472	4822 050 21002	1k	1%	0,6W
3473	4822 050 21002	1k	1%	0,6W
3474	4822 050 21002	1k	1%	0,6W
3475	4822 050 21002	1k	1%	0,6W
3476	4822 050 21002	1k	1%	0,6W
3477	4822 050 21002	1k	1%	0,6W
3478	4822 050 21002	1k	1%	0,6W
3479	4822 116 52234	100k	5%	0,5W
3481	4822 116 52921	4k7	1%	0,6W
3482	4822 116 52921	4k7	1%	0,6W
3483	4822 116 52921	4k7	1%	0,6W
3484	4822 116 52921	4k7	1%	0,6W
3485	4822 050 21002	1k	1%	0,6W
3486	4822 050 21002	1k	1%	0,6W
3487	4822 116 52921	4k7	1%	0,6W
3488	4822 116 52921	4k7	1%	0,6W
3489	4822 116 52921	4k7	1%	0,6W
3490	4822 116 52921	4k7	1%	0,6W
3491	4822 050 21002	1k	1%	0,6W
3492	4822 050 21002	1k	1%	0,6W
3493	4822 050 21002	1k	1%	0,6W
3494	4822 050 21002	1k	1%	0,6W
3496	5322 113 44016	330R	5%	3,5W
3497	4822 050 28209	82R	1%	0,6W
3498	5322 113 44016	330R	5%	3,5W
3499	4822 050 28209	82R	1%	0,6W
3503	4822 050 21203	12k	1%	0,6W

RESISTORS

3504	4822 050 21203	12k	1%	0,6W
3505	4822 050 21203	12k	1%	0,6W
3506	4822 050 21203	12k	1%	0,6W
3507	4822 116 52244	15k	5%	0,5W
3508	4822 116 52244	15k	5%	0,5W
3511	4822 102 10422	POTMETER 2x 50kX		
3512	4822 102 10422	POTMETER 2x 50kX		
3515	4822 050 25604	560k	1%	0,6W
3516	4822 050 25604	560k	1%	0,6W
3517	4822 116 52224	470R	5%	0,5W
3518	4822 116 52224	470R	5%	0,5W
3521	4822 116 52224	470R	5%	0,5W
3522	4822 116 52224	470R	5%	0,5W
3523	4822 116 80335	47R	5%	NFR
3524	4822 116 80335	47R	5%	NFR
3525	4822 102 10413	POTMETER 2x 10kX		
3526	4822 102 10414	POTM. 2x20kB		
3527	4822 050 21502	1k5	1%	0,6W
3528	4822 050 21502	1k5	1%	0,6W
3531	4822 050 21002	1k	1%	0,6W
3532	4822 050 21002	1k	1%	0,6W
3533	4822 116 52234	100k	5%	0,5W
3534	4822 050 21002	1k	1%	0,6W
3535	4822 050 28201	820R	1%	0,6W
3536	4822 050 21002	1k	1%	0,6W
3537	4822 050 28201	820R	1%	0,6W
3541	4822 116 52921	4k7	1%	0,6W
3542	4822 116 52921	4k7	1%	0,6W
3543	4822 116 52921	4k7	1%	0,6W
3544	4822 116 52921	4k7	1%	0,6W
3546	4822 050 21002	1k	1%	0,6W
3547	4822 116 80335	47R	5%	NFR
3548	4822 116 80335	47R	5%	NFR
3549	4822 050 21002	1k	1%	0,6W
3551	4822 050 23901	390R	1%	0,6W
3552	4822 050 23901	390R	1%	0,6W
3553	4822 116 52272	330k	5%	0,5W
3554	4822 116 52272	330k	5%	0,5W
3555	4822 050 25603	56k	1%	0,6W
3556	4822 050 25603	56k	1%	0,6W
3557	4822 050 23901	390R	1%	0,6W
3558	4822 050 23901	390R	1%	0,6W
3563	4822 116 52272	330k	5%	0,5W
3564	4822 116 52272	330k	5%	0,5W
3565	4822 116 52264	27k	5%	0,5W
3566	4822 116 52264	27k	5%	0,5W
3567	4822 116 52303	8k2	5%	0,5W
3568	4822 116 52303	8k2	5%	0,5W
3569	4822 116 52244	15k	5%	0,5W
3570	4822 116 52244	15k	5%	0,5W
3571	4822 116 80335	47R	5%	NFR
3572	4822 116 80335	47R	5%	NFR
3573	4822 116 52264	27k	5%	0,5W
3574	4822 116 52264	27k	5%	0,5W
3575	4822 050 21304	130k	1%	0,6W
3576	4822 050 21304	130k	1%	0,6W
3577	4822 050 23603	36k	1%	0,6W
3578	4822 050 23603	36k	1%	0,6W
3579	4822 051 10223	22k	2%	0,25W
3580	4822 051 10223	22k	2%	0,25W
3581	4822 050 26202	6k2	1%	0,6W
3582	4822 050 26202	6k2	1%	0,6W
3583	4822 050 21101	110R	1%	0,6W
3584	4822 050 21101	110R	1%	0,6W
3585	4822 050 21803	18k	1%	0,6W
3586	4822 050 21803	18k	1%	0,6W
3591	4822 051 10223	22k	2%	0,25W
3592	4822 051 10223	22k	2%	0,25W
3593	4822 116 52234	100k	5%	0,5W
3594	4822 116 52234	100k	5%	0,5W
3595	4822 050 26803	68k	1%	0,6W
3596	4822 050 26803	68k	1%	0,6W
3599	4822 116 52234	100k	5%	0,5W
3600	4822 116 52234	100k	5%	0,5W
3601	4822 116 80335	47R	5%	NFR
3602	4822 116 80335	47R	5%	NFR
3605	4822 116 52234	100k	5%	0,5W
3606	4822 116 52234	100k	5%	0,5W
3609	4822 116 52224	470R	5%	0,5W
3610	4822 116 52224	470R	5%	0,5W
3611	4822 116 80335	47R	5%	NFR
3612	4822 116 80335	47R	5%	NFR
3613	4822 050 21002	1k	1%	0,6W
3614	4822 050 21002	1k	1%	0,6W
3615	4822 116 52224	470R	5%	0,5W
3616	4822 116 52224	470R	5%	0,5W
3617	4822 116 52217	270R	5%	0,5W
3618	4822 116 52217	270R	5%	0,5W
3619	4822 050 23302	3k3	1%	0,6W
3620	4822 050 28209	82R	1%	0,6W
3621	4822 116 52234	100k	5%	0,5W
3622	4822 116 52234	100k	5%	0,5W
3624	4822 116 52234	100k	5%	0,5W
3831	4822 050 12402	2k4	1%	0,4W
3832	4822 050 12402	2k4	1%	0,4W
3841	4822 050 12402	2k4	1%	0,4W
3842	4822 050 12402	2k4	1%	0,4W
3851	4822 116 52234	100k	5%	0,5W
3852	4822 116 52234	100k	5%	0,5W
3853	4822 050 21002	1k	1%	0,6W

PHILIPS

Wichtig für die Werkstatt!

Sachgebiet: Personal Audio AC 53

SI

Nummer: 53011

Datum: 10.06.91

Service Information

Betrifft:

Lautsprecherbox
70FB310/00G

Verteiler: INTERN UND EXTERN

Bitte berichtigen Sie die Bestellnummern auf Seite 2 des Service-Manuals 4822 725 23095:

Pos. 1002: von 4822 240 30489 in **4822 240 70228**
Pos. 2001: von 4822 214 21435 in **4822 124 21679**

Grund: die Teile mit den obengenannte (alten) Bestellnummern wurden nicht in die Geräte eingebaut.

4812 829 53011

Philips GmbH · Geschäftsbereich Service · Hamburg 1

Nachdruck nicht gestattet! Änderungen vorbehalten.

CAPACITORS

2413	4822	122	31435	470pF	10%	50V	2557	4822	124	40242	1uF 20% 63V
2424	4822	124	21694	1000uF	20%	10V	2558	4822	124	40242	1uF 20% 63V
2425	4822	124	40248	10uF	20%	63V	2559	4822	124	40248	10uF 20% 63V
2426	4822	121	42408	220nF	5%	63V	2560	4822	124	40248	10uF 20% 63V
2427	4822	122	10177	10nF	20%	25V	2561	4822	124	40248	10uF 20% 63V
2428	4822	122	10166	22nF	30%	16V	2562	4822	124	40248	10uF 20% 63V
2429	4822	124	40244	2,2uF	20%	63V	2563	4822	122	10177	10nF 20% 25V
2430	4822	122	10166	22nF	30%	16V	2564	4822	122	10177	10nF 20% 25V
2431	4822	121	51252	470nF	5%	63V	2565	4822	126	11309	2,7nF 10% 50V
2434	4822	121	51252	470nF	5%	63V	2566	4822	126	11309	2,7nF 10% 50V
2435	4822	121	51252	470nF	5%	63V	2567	4822	122	10166	22nF 30% 16V
2441	4822	122	10166	22nF	30%	16V	2568	4822	122	10166	22nF 30% 16V
2451	4822	121	90058	CAP NETWORK 8x100pF			2569	4822	124	41506	47uF 20% 16V
2452	4822	122	10183	100pF	5%	50V	2570	4822	124	41506	47uF 20% 16V
2456	4822	122	31435	470pF	10%	50V	2571	4822	124	41506	47uF 20% 16V
2457	4822	122	31435	470pF	10%	50V	2572	4822	124	41506	47uF 20% 16V
2458	4822	122	31435	470pF	10%	50V	2573	4822	122	10166	22nF 30% 16V
2459	4822	122	31435	470pF	10%	50V	2574	4822	122	10166	22nF 30% 16V
2481	4822	122	10166	22nF	30%	16V	2575	4822	124	40242	1uF 20% 63V
2501	4822	121	43187	27nF	10%	63V	2576	4822	124	40242	1uF 20% 63V
2502	4822	121	43187	27nF	10%	63V	2577	4822	124	40248	10uF 20% 63V
2503	4822	122	10185	1,2nF	10%	50V	2578	4822	124	40248	10uF 20% 63V
2504	4822	122	10185	1,2nF	10%	50V	2579	4822	122	10215	27pF 5% 50V
2505	4822	124	40242	1uF	20%	63V	2580	4822	122	10215	27pF 5% 50V
2506	4822	124	40242	1uF	20%	63V	2581	4822	122	10158	1nF 10% 50V
2507	4822	124	40248	10uF	20%	63V	2582	4822	122	10158	1nF 10% 50V
2508	4822	124	40248	10uF	20%	63V	2583	4822	122	10166	22nF 30% 16V
2509	4822	126	11183	1nF	20%	50V	2584	4822	122	10166	22nF 30% 16V
2510	4822	126	11183	1nF	20%	50V	2585	4822	124	41506	47uF 20% 16V
2511	4822	122	33997	56pF	5%		2586	4822	124	41506	47uF 20% 16V
2512	4822	122	33997	56pF	5%		2587	4822	126	10003	33nF 30% 50V
2515	4822	122	10166	22nF	30%	16V	2589	4822	124	40242	1uF 20% 63V
2516	4822	122	10166	22nF	30%	16V	2590	4822	124	40242	1uF 20% 63V
2517	4822	124	41506	47uF	20%	16V	2591	4822	124	40248	10uF 20% 63V
2518	4822	124	41506	47uF	20%	16V	2592	4822	124	40248	10uF 20% 63V
2519	4822	121	51356	180nF	10%	63V	2593	4822	124	41506	47uF 20% 16V
2520	4822	121	51356	180nF	10%	63V	2594	4822	124	41506	47uF 20% 16V
2521	4822	124	22794	47uF	20%	10V	2595	4822	122	10166	22nF 30% 16V
2542	4822	122	10158	1nF	10%	50V	2596	4822	122	10166	22nF 30% 16V
2543	4822	124	41525	100uF	20%	25V	2597	4822	122	10158	1nF 10% 50V
2544	4822	124	42118	1000uF	20%	25V	2598	4822	122	10158	1nF 10% 50V
2547	4822	122	10158	1nF	10%	50V	2599	4822	122	10183	100pF 5% 50V
2548	4822	124	41525	100uF	20%	25V	2600	4822	122	10183	100pF 5% 50V
2549	4822	124	42119	4700uF	20%	25V	2605	4822	122	10176	4,7nF 10% 50V
2551	4822	122	10183	100pF	5%	50V	2606	4822	122	10176	4,7nF 10% 50V
2552	4822	122	10183	100pF	5%	50V	2607	4822	124	40242	1uF 20% 63V
2553	4822	122	10183	100pF	5%	50V	2608	4822	124	22794	47uF 20% 10V
2554	4822	122	10183	100pF	5%	50V	2611	4822	122	31435	470pF 10% 50V
2555	4822	122	10158	1nF	10%	50V	2612	4822	122	31435	470pF 10% 50V
2556	4822	122	10158	1nF	10%	50V	2613	4822	122	10176	4,7nF 10% 50V

CHIP CAPACITORS

2102	5322	122	32448	10pF	5%	50V	2156	4822	122	33339	4,7nF 10% 50V
2104	5322	122	32658	22pF	5%	50V	2157	4822	122	33339	4,7nF 10% 50V
2105	5322	122	32531	100pF	5%	50V	2159	5322	122	32654	22nF 10% 63V
2106	4822	122	31727	470pF	5%	63V	2160	4822	122	31727	470pF 5% 63V
2107	4822	122	31727	470pF	5%	63V	2162	4822	122	31727	470pF (not /02)
2108	4822	122	31727	470pF	5%	63V	2162	4822	122	32142	270pF (only /02)
2110	4822	122	32765	820pF	10%	63V	2164	5322	122	34099	470pF (not /02)
2112	4822	122	31727	470pF	5%	63V	2164	4822	122	33173	560pF (only /02)
2113	4822	122	31727	470pF	5%	63V	2166	5322	122	32654	22nF 10% 63V
2114	4822	122	32765	820pF	10%	63V	2169	5322	122	32654	22nF 10% 63V
2115	5322	122	32448	10pF	5%	50V	2171	4822	122	31727	470pF 5% 63V
2116	5322	122	32658	22pF	(only /02)		2174	4822	122	33543	15nF 10%
2117	4822	122	32139	12pF	(only /02)		2175	4822	122	33543	15nF 10%
2118	4822	122	32507	6,8pF	(not /02)		2178	4822	122	33173	560pF 10% 63V
2118	4822	122	31971	10pF	(only /02)		2179	5322	122	32654	22nF 10% 63V
2120	5322	122	32654	22nF	10%	63V	2183	4822	122	32927	220nF 10% 63V
2124	4822	122	31727	470pF	5%	63V	2184	4822	122	31727	470pF 5% 63V
2125	5322	122	32966	39pF	(not /02)		2185	4822	122	32765	820pF 10% 63V
2125	5322	122	33538	150pF	(only /02)		2186	4822	122	31727	470pF 5% 63V
2126	5322	122	32966	39pF	(not /02)		2187	4822	122	31727	470pF 5% 63V
2126	5322	122	33538	150pF	(only /02)		2188	4822	122	31727	470pF 5% 63V
2127	5322	122	32654	22nF	10%	63V	2189	4822	122	31965	220pF 5%
2129	5322	122	32654	22nF	10%	63V	2191	5322	122	32448	10pF 5% 50V
2132	5322	122	34123	1nF	10%	50V	2192	4822	122	32927	220nF 10% 63V
2133	4822	122	31825	27pF	10%	50V	2193	4822	122	32765	820pF 10% 63V
2138	4822	122	32482	22pF	5%	63V	2195	4822	122	32927	220nF 10% 63V
2140	4822	122	32927	220nF	10%	63V	2196	5322	122	32268	470pF 10% 50V
2142	5322	122	32452	47pF	5%	50V	2197	4822	122	32765	820pF 10% 63V
2143	5322	122	32452	47pF	5%	50V	2199	5322	122	33538	150pF 5% 63V
2145	4822	122	32765	820pF	10%	63V	2200	5322	122	31647	1nF 10% 63V
2147	5322	122	32268	470pF	10%	50V	2201	4822	122	32927	220nF 10% 63V
2148	4822	122	31727	470pF	5%	63V	2210	5322	122	32268	470pF 10% 50V
2149	5322	122	33537	1,2pF	5%	63V	2211	5322	122	32448	10pF 5% 50V
2153	5322	122	32654	22nF	10%	63V					